

Minerals and Waste Joint Plan



Sustainability Appraisal

Appendix 1, Appendix 2 and Appendix 4

October 2016

Sustainability Appraisal Report Appendix 1

The Sustainability Appraisal Framework

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SA Framework used in Policy Assessments

Sustainability Objective	Sub objectives	Indicators ¹
<p>1. Protect and enhance biodiversity and geodiversity and improve habitat connectivity</p>	<ul style="list-style-type: none"> -Protect and enhance designated nature conservation sites and protected species; -To contribute to the suitable protection of trees, woodlands and forests -Avoid damage to designated geological assets and create new areas of geodiversity value; -Seek to contribute to national targets for biodiversity, including for national and local priority species and habitats; -Seek to contribute to local targets for geodiversity; -Preserve the integrity of habitat networks and increase the connectivity between habitats; -Maximise the potential for the creation of new habitats; -Minimise the spread of invasive species; -Provide opportunities for people to access the natural environment; -Protect and manage ancient woodland; -Appropriately manage and enhance PAWS; -Promote improvements for biodiversity at the landscape scale; 	<ul style="list-style-type: none"> 1. Percentage of SSSIs in favourable condition (Natural England) 2. Total area of SSSI (Natural England) 3. Total area of UK BAP Priority Habitat (Natural England) 4. Area of ancient and semi natural woodland (Natural England) 5. Area of ancient replanted woodland (PAWS) (Natural England) 6. Area of land in Higher Level Stewardship (Natural England) 7. Area of SINC land (NYCC) 8. Number of alerts for invasive species relevant to North Yorkshire (Defra)² 9. Number of alien species on UKTAG List found in North Yorkshire³

¹ See explanation above regarding the purpose of indicators

² Species distribution to be taken from the National Biodiversity Network.

³ Species distribution to be taken from the National Biodiversity Network.

Sustainability Objective	Sub objectives	Indicators ¹
	<ul style="list-style-type: none"> -Achieve a net gain for biodiversity 	
<p>2. Enhance or maintain water quality and supply and improve efficiency of water use</p>	<ul style="list-style-type: none"> -Ensure that Water Framework Directive status objectives for surface and groundwater are not compromised by maintaining or improving upon ecological and chemical status; - Prevent unsustainable levels of ground and surface water abstraction; - Avoid wasting water; -Protect groundwater source protection zones; 	<ol style="list-style-type: none"> 1. Percentage of water bodies achieving overall good status in River Basin Management Plans (Environment Agency) 2. Water resource availability at low flows as reported in CAMS (Environment Agency) 3. Groundwater resource availability as reported in CAMS (Environment Agency)
<p>3. Reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation</p>	<ul style="list-style-type: none"> -Encourage more sustainable transport modes; -Reduce the impact of transporting minerals by road on local communities; -Reduce vehicle emissions due to mineral and waste movements; -Encourage proximity between minerals and waste sites and markets / sources⁴; -Safeguard or deliver valuable infrastructure that may contribute to modal shift; -Promote active travel and sustainable commuting 	<ol style="list-style-type: none"> 1. Motor vehicle traffic (Vehicle miles) by local authority (DfT) 2. Proportion of residents who walk or cycle, at least one per month, for utility purposes (for reasons other than recreation, health, training or competition) by local authority⁵ (DfT) 3. Road transport energy consumption at local authority level (DfT/NAEI)

⁴ This reduces the distance required to transport products / waste and can provide benefits to businesses in terms of supply chains

⁵ Department for Transport/Sport England, 2012. Local Area Walking and Cycling Statistics: England 2010/11 [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/9105/local-area-walking-and-cycling-2010-11.pdf].

Sustainability Objective	Sub objectives	Indicators ¹
	-Improve congestion	
4. Protect and improve air quality	<ul style="list-style-type: none"> -Reduce all emissions to air from new development; -To reduce the causes and levels of air pollution in Air Quality Management Areas and seek to avoid new designations; -To minimise dust and odour, particularly where communities or other receptors may be affected; -Support cleaner technology for minerals and waste development; -Avoid locating development in areas of existing poor air quality where it could result in negative impacts on the health of present and future occupants / users; -Seek to avoid adding to pollutant deposition at sensitive habitats. 	<ol style="list-style-type: none"> 1. Number of Air Quality Management Areas 2. Number of SAC and SPAs exceeding critical loads for deposition of either N or S (APIS) 3. Mapped distribution of NOX, NO2, PM10 and PM2.5 (Defra LAQM)
5. Use soil and land efficiently and safeguard or enhance their quality	<ul style="list-style-type: none"> -Reduce the permanent loss of best and most versatile agricultural land; -Conserve and enhance soil resources and quality; -Promote good land management practices on restored land; -Reduce the amount of derelict, contaminated, degraded and vacant / underused land; -Recover nutrient value from biodegradable wastes (e.g. compost, biodigestate) -Minimise land taken up by minerals and waste development 	<ol style="list-style-type: none"> 1. Number of minerals and waste applications which are located within areas of best and most versatile (BMV) agricultural land (NYCC) 2. Land use change: previous use of land changing to developed use annual average by region⁶ (DCLG)

⁶Derived from the Department for Communities and Local Government 'Live Tables on Land Use Change Statistics' which are collated by Government Office Region [<https://www.gov.uk/government/statistical-data-sets/live-tables-on-land-use-change-statistics>].

Sustainability Objective	Sub objectives	Indicators ¹
	<ul style="list-style-type: none"> -Seek to utilise brownfield land for waste development where possible 	
6. Reduce the causes of climate change	<ul style="list-style-type: none"> -Reduce emissions of greenhouse gases; -Reduce CO2 from minerals and waste development through use of energy efficient and low and zero carbon design and adoption of efficient plant and processes; -Maximise the generation and use of renewable energy in appropriate locations; -Prevent the loss of embodied energy by promoting the use of recycled, recyclable and secondary resources; -Promote carbon storage through appropriate land management -Adhere to the principles of the energy hierarchy⁷ 	<ol style="list-style-type: none"> 1. Emissions of CO2 per capita by Local Authority (excluding LULUCF⁸) (DECC) 2. Industrial and commercial per capita CO2 emissions by Local Authority (DECC) 3. Road transport CO2 emissions per capita by Local Authority (DECC) 4. Land use change CO2 emissions per capita by Local Authority (DECC)⁹
7. Respond and adapt to the effects of climate change	<ul style="list-style-type: none"> -To plan and implement adaptation measures for the likely effects of climate change; -Ensure 'sustainable adaptation' is planned for¹⁰; 	<ol style="list-style-type: none"> 1. UKCP climate change scenarios¹¹(UKCP) 2. Mapped extent of Flood Zones under Climate Change as reported in available Strategic Flood Risk

⁷ The energy hierarchy is analogous to the waste hierarchy in that it shows a sequence of preferred approaches to obtaining energy. Broadly this can be shown as three steps, in order of preference: 'Reduce' the amount of energy required in the first place (for instance through good design); 'Re-use' waste energy such as heat (e.g. through combined heat and power technology); and 'recycling' (which means the provision of energy that has some processing applied – e.g. renewable energy to meet demand or the extracting of energy from waste). CABE, 2011. Thinking Differently – The Energy Hierarchy.

⁸ LULUCF relates to emissions from Land Use, Land Use Change and Forestry.

⁹ There is a time lag between publication of the DECC carbon statistics at a local authority level and the present year, such that 2010 figures were published in 2012.

¹⁰ Sustainable Adaptation has been defined by Natural England. According to Natural England 'It is important that any adaptation action is sustainable. This means that any response by society should not actually add to climate change, cause detrimental impacts or limit the ability or other parts of the natural environment society or business

Sustainability Objective	Sub objectives	Indicators ¹
	<p>Ensure that minerals and waste developments are not susceptible to effects of climate change</p> <p>-Ensure that minerals and waste developments do not hinder adaptation to climate change</p> <p>- will the policy contribute to food security in a changing climate?"</p>	<p>Assessments¹² (NYCC, CYC, NYMNPA)</p> <p>3. Allocations requiring exception testing in North Yorkshire SFRA (NYCC)</p>
<p>8. Minimise the use of resources and encourage their re-use and safeguarding</p>	<p>-To safeguard and use minerals resources efficiently;</p> <p>-Safeguard infrastructure that may support more sustainable minerals and waste development</p> <p>-To encourage the re-use of primary materials;</p> <p>-To promote the efficient use of resources throughout the lifecycle of a development, including construction, operation and decommissioning of minerals and waste infrastructure;</p> <p>Encourage the utilisation of sustainable construction techniques;</p> <p>-Promote the use of secondary and recycled minerals resources where they can play a role in reducing the need for more primary minerals extraction</p>	<p>1. Number / type / area of safeguarding areas defined in Plan</p> <p>2. Reserves of primary land won aggregate and crushed rock (LAA)</p> <p>3. Sales of secondary aggregate in the North Yorkshire sub region (LAA)</p>
<p>9. Minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable</p>	<p>-Use less materials through design and processing;</p> <p>-Re-use materials where possible;</p> <p>-Encourage recycling;</p>	<p>1. Total waste received by waste facilities by category ('household, industrial and commercial', 'inert / construction and demolition', 'hazardous', 'unknown') (Environment Agency);</p>

to carry out adaptation elsewhere" (Natural England, undated. Sustainable Adaptation [URL: naturalengland.org.uk/ourwork/climateandenergy/climatechange/adaptation/sustainable.aspx - URL no longer available].

¹¹ Changes to precipitation and temperature to be recorded in line with latest available data.

¹² As further SFRA work becomes available the spatial extent of increased flood risk from rivers will become clearer.

Sustainability Objective	Sub objectives	Indicators ¹
	<p>-Recover residual resources (e.g. through anaerobic digestion or energy recovery);</p> <p>-Support 'recycling on the go';¹³</p> <p>-Recognise and promote the value of waste streams as alternatives to primary mineral extraction;</p> <p>-Promote economic gain through re-use</p>	<p>2. Waste management method of household waste arisings in North Yorkshire (NYCC)</p> <p>3. Anaerobic digestion plants in the plan area¹⁴</p>
<p>10. Conserve and enhance the historic environment, heritage assets and their settings.</p>	<p>-To protect and enhance those elements, including setting, which contribute to the significance of:</p> <ul style="list-style-type: none"> ➤ World Heritage Sites ➤ Scheduled Monuments ➤ Archaeological Features ➤ Listed buildings ➤ Historic parks and gardens ➤ Historic battlefields ➤ Conservation Areas; ➤ The city of York <p>-To provide appropriate protection for archaeological features in areas of potential development;</p> <p>-To protect the wider historic environment from the potential impacts of proposed development and the cumulative impacts;</p> <p>-To improve access to, and enjoyment of, the historic environment where appropriate;</p> <p>-Preserve and enhance cultural heritage</p>	<p>1. Buildings, scheduled monuments, conservation areas, registered parks and gardens, registered battlefields 'at risk' as defined by the Heritage at Risk Register (English Heritage)</p> <p>2. Number of visits to historic sites (Yorkshire and the Humber) (English Heritage)</p>

¹³ 'Recycling on the go' is promoted by the Government's Waste Policy Review. It represents recycling on the street and in public places.

¹⁴ As shown on the official biogas plant map produced by 'Anaerobic Digestion' [URL: <http://www.biogas-info.co.uk/>].

Sustainability Objective	Sub objectives	Indicators ¹
	<ul style="list-style-type: none"> -Safeguard those elements which contribute to the special historic character and setting of York. -To ensure a steady supply of building and roofing stone for the repair and construction of buildings and structures -Protect and enhance important non-designated heritage assets 	
11. Protect and enhance the quality and character of landscapes and townscapes	<ul style="list-style-type: none"> -Conserve and enhance the natural beauty and cultural heritage of the North York Moors National Park; - To conserve and enhance the setting of designated landscapes, including those outside of the Plan area; - To protect and enhance the natural beauty of Areas of Outstanding Natural Beauty -To protect and enhance local landscape / townscape character and quality, local distinctiveness and sense of place; -To protect the setting of important townscapes; -To protect the purposes and 'positive use'¹⁵ of the Green Belt; -To protect coastal landscape and seascape character; -To protect and improve tranquillity levels and reduce sources of intrusion, such as light pollution; -To co-locate waste facilities with complementary industrial facilities where possible to reduce dispersed visual intrusion; 	<ol style="list-style-type: none"> 1. Number of minerals and waste planning applications in the green belt / designated landscapes / conservation areas (NYCC, CYC, NYMNPA); 2. Number of planning conditions related to visual amenity / noise / lighting for minerals and waste sites (NYCC, CYC, NYMNPA);

¹⁵ The National Planning Policy Framework defined 5 purposes to the Green Belt and also recommends that local planning authorities should 'plan positively to enhance the beneficial use of the Green Belt'.

Sustainability Objective	Sub objectives	Indicators ¹
	<ul style="list-style-type: none"> -Preserve, enhance and complement architectural character and complexity 	
<p>12. Achieve sustainable economic growth and create and support jobs</p>	<ul style="list-style-type: none"> -To increase the level and range of employment opportunities, particularly in deprived areas; -To encourage stable economic growth through provision of an adequate, sustainable and steady supply of minerals; -To promote conditions which enable sustainable local economic activity and regeneration and encourage creativity and innovation; -To capture value from waste streams by creating saleable products from them -Promote a low carbon economy -Support existing employment drivers and create new ones -Support existing businesses and the local economy outside of the minerals and waste sectors 	<ol style="list-style-type: none"> 1. Economically Active Rate of 16 to 64 year olds 2. Number of new bank accounts (first current accounts from a small business banking range) (LEP) 3. Unemployment rate (Annualised Population Survey Rate) 4. Gross median weekly earnings of residents and people who work within the area (NYCC) 5. Number of minerals and waste planning applications (NYCC)
<p>13. Maintain and enhance the viability and vitality of local communities</p>	<ul style="list-style-type: none"> -Provide opportunities to boost tourism -To promote job creation, training and volunteer opportunities through sustainable site restoration -Contribute to the provision of housing through the provision of construction materials -Promote conditions that would maintain the vitality and functionality of the community 	<ol style="list-style-type: none"> 1. Ratio of lower quartile house prices to lower quartile earnings (NYCC Stream) 2. Economically Active Rate of 16 to 64 year olds 4. Number of visits to historic sites (Yorkshire and the Humber) (English Heritage)
<p>14. Provide opportunities to enable recreation, leisure and</p>	<ul style="list-style-type: none"> -Provide opportunities to enable the enjoyment and 	<ol style="list-style-type: none"> 1. Length of Public Rights of Way Network

Sustainability Objective	Sub objectives	Indicators ¹
learning	<p>understanding of the special qualities of the National Park;</p> <ul style="list-style-type: none"> -Promote recreation in the countryside and AONBs, consistent with the wider social, economic and environmental facets; -Provide opportunities for lifelong learning -To contribute to networks of multifunctional green infrastructure -To increase access to the public rights of way network and the wider countryside 	<p>(NYCC/CYC/NYMNP)</p> <p>2. People qualified to at least level 4 who are economically active (NYCC Stream)</p> <p>3. Visits to places out of doors (as measured in Natural England's MENE programme) (Natural England)</p>
15. Protect and improve the wellbeing, health and safety of local communities	<ul style="list-style-type: none"> -To minimise the impact of nuisances associated with minerals and waste development, such as noise pollution, odour and severance; -Reduce traffic accidents -To reduce health inequalities; -To promote healthy living, offer opportunities for more healthy lifestyles and improve life expectancy; -To improve levels of wellbeing -To ensure the safety and security of local people and visitors -To ensure that pollution does not pose unacceptable risks to health 	<p>1. Incapacity benefit claimants as percentage of working age population (NYCC Steam)</p> <p>2. Mortality rate from coronary heart disease (NYCC Stream)</p> <p>3. Road accident Casualties – Killed and Seriously Injured (NYCC Stream)</p> <p>4. Life expectancy at birth (ONS)</p> <p>5. Fly tipping incidents reported by Local Authorities (by waste source) (NYCC Stream)</p> <p>6. Anti-social behaviour (all categories) number (NYCC Stream)</p> <p>7. All age respiratory disease mortality (Public Health England)</p>
16. Minimise flood risk and reduce the impact of flooding	<ul style="list-style-type: none"> -To ensure that the location and design of new development has regard to the potential risk, causes and consequences of 	<p>1. Allocations requiring exception testing in North Yorkshire SFRA (NYCC)</p>

Sustainability Objective	Sub objectives	Indicators ¹
	flooding; -To promote opportunities for sustainable flood alleviation; -To reduce the number of people and properties at risk of flooding.	2. Number of planning conditions relating to SUDS (NYCC, CYC, NYMNPA)
17. Address the needs of a changing population in a sustainable and inclusive manner	- To enable development and wider activity to meet the needs of the population; -To support shortened supply chains for building materials; -To enable the community to contribute to and have influence in decision making -To improve public access to facilities enabling sustainable waste management -To support community led waste management schemes -Reduce social exclusion	1. Number of consultation responses to Joint Plan and Sustainability Appraisal (NYCC) 2. Number of Household Waste Recycling Centres (NYCC, CYC) 3. Indices of Deprivation Average Rank (NYCC Stream)

SA Framework used in Site Assessments

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>How far is the Site from key biodiversity and geo-diversity assets, i.e.: international, national and local nature / geology designations, ancient woodlands or habitats of principal importance?</p> <p>Would development of the Site be likely to have any significant effects on the integrity of an SAC, SPA or Ramsar site?¹⁸</p> <p>Would future development at the Site be likely to have an adverse effect on any Site of Special Scientific Interest or locally designated nature conservation site or network?</p> <p>Are there likely to be protected or nationally important habitats or species¹⁹ on the Site or within a distance where they are likely to be affected?</p>	<p>Example: The site is 50 metres from [name of SAC]. This may be significant as there is likely to be hydrological connectivity between the Site and the SAC.</p> <p>There is also a range of habitats on the Site including woodland and the UK principal habitat [name of principal habitat] which is likely to support a number of species including protected species such as</p>			

¹⁶ In the final environmental / sustainability report predicted effects on key indicators will also be taken into account in the appraisal. For a list of the indicators that accompanies each sustainability objective see the Joint Plan Sustainability Appraisal Scoping Report at <http://www.northyorks.gov.uk/mwsustainability> .

¹⁷ It is important to note that, when deciding whether a score should be awarded we will employ ‘source – pathway – receptor’ thinking to help determine if an observed effect has a larger or smaller impact on relevant receptors. For a full explanation of the ‘source – pathway – receptor’ approach users should consult the SA scoping report. However, readers should note that sources will be derived from the site allocation considered alongside the range of possible impacts associated with either developing the site per se, or where more detail is known on the use of the site, by considering the table of effects of minerals and waste development identified in the sustainability appraisal issues and options report. Receptors will be considered in terms of their sensitivity and capacity to accommodate change wherever possible, and will broadly align with the constraints and opportunities identified at step 2.

¹⁸ This will be determined through Habitats Regulations Assessment of Sites and Areas

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>Would development of the Site be likely to result in the loss or deterioration of irreplaceable habitats, including ancient woodland?</p> <p>Does the Site contain any woodland or trees or is it likely to affect any adjacent woodland?</p> <p>Would developing the Site be likely to damage geological assets such as Local Geological Sites or RIGS or enhance them?</p> <p>Is there an opportunity to improve the connections between, increase the area of, or improve the condition of nationally important habitats?</p> <p>Might locating development at this Site increase or inhibit the distribution of invasive species?</p> <p>Does allocating the Site represent an opportunity for people wishing to access the natural environment, or will allocating the Site block access?</p> <p>Are there adjacent habitats that could be affected by possible / likely future de-watering of at the Site if developed? (Minerals only.)</p> <p>Are there any cumulative or synergistic effects on biodiversity / geo-diversity resulting from nearby planned developments?</p>	<p>[name of protected species].</p> <p>The SAC is known to be affected by invasive plant species such as [name]. Movement of vehicles on Site may increase fertility close to the boundary of the SAC through pollution deposition.</p> <p>Initial assessment of the Site shows that it has a (-) negative influence on biodiversity.</p>			

¹⁹ Nationally important habitats and species are those listed as habitats and species of principal importance by the Secretary of State in consultation with Natural England in line with the requirements of Section 41 of the Natural Environment and Rural Communities Act, 2006. The latest lists of such habitats and species can be found at <http://webarchive.nationalarchives.gov.uk/20140605090108/http://www.naturalengland.org.uk/ourwork/conservation/biodiversity/protectandmanage/habsandspeciesimportance.aspx>

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Would future development of the Site be likely to affect surface or ground water quality and quantity and would it be likely to prevent that water body reaching good status?</p> <p>Is the Site on a significant aquifer and is this likely to be affected?</p> <p>Would development at the Site divert water from a Source Protection Zone?</p> <p>Is the topography of the Site conducive to run off, and if the Site were developed would this affect any sensitive receptors?</p> <p>Is the Site in a Nitrate Vulnerable Zone and is this likely to be affected?</p> <p>Will allocating the site impact significantly on water availability?</p> <p>Are there any cumulative or synergistic effects on water resulting from nearby planned developments?</p>				
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>How far is the Site from significant markets or sources?</p> <p>Is the location justifiable given other locational factors (such as the distribution of minerals) or would the location be likely to generate more traffic impacts than alternative Site options?</p> <p>Are there opportunities for sustainable movement of minerals or waste to and from the Site, if developed? For example, is there a railhead or wharf that could be used nearby?</p> <p>Is the site proximal to the strategic road network?</p> <p>Is the Site accessible to employees (e.g. close to a rail station or cycle route)</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>or is it likely to involve long road journeys?</p> <p>Does the road system close to the Site have sufficient capacity to accommodate the levels of traffic likely to be generated by the Site if developed?</p> <p>Does the Allocation safeguard any transport infrastructure?</p> <p>Would potential traffic from the Site, if developed, be routed through settlements?</p> <p>Are there any opportunities to utilise biogas or other sustainable fuels for transport from minerals and waste operations?</p> <p>Are there any cumulative or synergistic effects on transport resulting from nearby planned developments?</p>				
4. To protect and improve air quality	<p>Would development at the site and the associated generation of traffic, be likely to cause air pollution?</p> <p>Would it be likely that significant dust would be generated?</p> <p>Is the Site close to areas or populations that are sensitive to pollution or dust deposition?</p> <p>Are there other Sites close by that are likely to add to any air pollution problems that might be associated with the site?</p> <p>Is the Site, or are likely transport routes, in or close to an Air Quality Management Area or near to an AQMA that is close to being declared?</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>Will possible development at a Site generate bio-aerosols and would this affect any receptors? (Waste sites only.)</p> <p>Will possible development at a Site generate significant odours? (Waste sites only.)</p> <p>Are there any cumulative or synergistic effects on air resulting from nearby planned developments?</p>				
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Is the Site in Agricultural Land Classification Zones 1 to 3a (where 3a can be differentiated)?</p> <p>Is the Site on brownfield land?</p> <p>How much land would be lost to the Site, temporarily or permanently, if developed?</p> <p>Would development of the Site present an opportunity to enhance soil or agricultural land quality?</p> <p>Would the Site allocation support a process that is likely to recover nutrient value from biodegradable waste or provide nutrient value from minerals?</p> <p>If the site is on contaminated land, how would its development be likely to affect the water environment?</p> <p>Would land instability be likely to be an issue?</p> <p>Are there any cumulative or synergistic effects on soils and land resulting from nearby planned developments?</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
6. Reduce the causes of climate change	<p>Is the land on the Site likely to hold significant carbon stocks (e.g. would woodland, deep peat, heathland, bogs or other significant carbon stores be lost)?</p> <p>Is access to the Site likely to degrade habitats important for carbon storage?</p> <p>Is the site allocated for a purpose that is likely to move existing waste up the waste hierarchy thereby reducing emissions?</p> <p>How far is the Site from significant markets or sources? Is this likely to be a significant source of unnecessary CO2?</p> <p>Does the site have potential for the creation of new carbon sinks?</p> <p>Could the site offer opportunities for renewable or low carbon energy production as part of its development for minerals or waste?</p> <p>Are there any cumulative or synergistic effects on climate change resulting from nearby planned developments?</p>				
7. To respond and adapt to the effects of climate change	<p>Is the Site in an area that is likely to flood?</p> <p>Is allocating the Site likely to block the ability of neighbouring land uses to adapt to climate change? (E.g. will the site form a barrier to the formation of a coherent ecological network?)</p> <p>Would development of the Site be likely to provide an opportunity to deliver climate change adaptation? (E.g. habitat refuge etc.)</p> <p>Are there any cumulative or synergistic effects on climate adaptation</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>resulting from nearby planned developments?</p> <p>Will the site contribute to food security in a changing climate?</p>				
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Would the Site be allocated for a purpose likely to facilitate the recycling or re-use of minerals or waste?</p> <p>Would the Site be allocated for a purpose that is likely to facilitate the movement of waste up the waste hierarchy (thereby reducing demand for future virgin materials)? (Waste sites only.)</p> <p>Would the Site safeguard infrastructure that may support more sustainable minerals and waste development?</p> <p>Are the minerals proposed to be extracted necessary to meet identified requirements? (Minerals sites only.)</p> <p>Could the Site enable the use of redundant buildings and their curtilages?</p>				
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Would the Site be allocated for a purpose which moves waste management up the waste hierarchy? (waste sites only)</p> <p>Would the Site be likely to increase the opportunities for local people and businesses to access waste management infrastructure? (waste sites only)</p> <p>Would allocating the Site offer the potential to enable otherwise wasted resources to be utilised (e.g. through co-locating to allow utilisation of waste heat energy)?</p> <p>Would the Site contribute to the Joint Plan Authorities' ability to manage their</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	own waste arisings?				
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Is development of the Site likely to result in harm to or enhance elements which contribute to the significance of the following:</p> <p><u>Designated Heritage Assets</u></p> <ul style="list-style-type: none"> -World Heritage Sites -Scheduled Monuments -Listed buildings -Historic parks and gardens -Historic battlefields -Conservation Areas <p><u>Non-designated Heritage Assets</u></p> <ul style="list-style-type: none"> -Archaeological features 				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>-Assets on Historic Environment Registers</p> <p>Is development at the Site, taken together with other developments, likely to diminish the historic character / environment of the area (either cumulatively or synergistically)?</p> <p>Would the development of the Site provide building or roofing stone which could be used to conserve the heritage assets of the area or reinforce the distinctive character of the Plan area?</p>				
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Would the Site be within a nationally protected landscape (National Park or AONB)?</p> <p>Will the Site affect an area of heritage coast or an area that is conditionally exempt from heritage tax?</p> <p>Is it within a locally protected landscape?</p> <p>Is the Site likely to affect views from key visual receptors such as National Parks, AONBs or locally identified important landscapes areas, or affect the setting of these areas?</p> <p>How might the Site be likely to negatively alter (or enhance) the landscape setting of a settlement or its townscape?</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>Can the landscape in which the Site is located, taken together with other Sites, accommodate the level of change which the allocation may enable (including cumulative and synergistic change)?</p> <p>Is the Site in the Green Belt and will it work against the purposes of Green Belt?</p> <p>Is the Site likely to significantly increase visual intrusion (e.g. by being in a high or prominent location or by increasing light pollution)?</p> <p>Is the Site in a particularly tranquil area?</p> <p>Is the Site screened?</p> <p>Are there any local factors that suggest a design led approach to mitigating landscape / townscape might not be possible?</p> <p>Will vehicle movements from the Site change the character of the surrounding area?</p>				
12. Achieve sustainable economic growth and create and support jobs	<p>Would development of the Site be likely to increase local employment opportunities?</p> <p>Would allocating the Site be likely to enable value to be added to products from the waste or minerals industry?</p> <p>Would allocating the Site be likely to enable new business opportunities to emerge or help support existing businesses?</p> <p>Would the location of the Site be likely to hinder or enhance the development</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	<p>of low carbon development?</p> <p>Would development of the Site be likely to hinder other economic or employment opportunities?</p> <p>Would the costs of minerals or waste management be reduced through allocating the Site?</p> <p>Are there any cumulative or synergistic effects on the economy resulting from nearby planned developments?</p>				
13. Maintain and enhance the viability and vitality of local communities	<p>Would allocating the Site be likely to enable opportunities that would boost tourism?</p> <p>Would future development at the Site allow for new local job creation, training or learning opportunities?</p> <p>Would allocation of the Site be likely to enable the provision of locally available construction materials or recycled construction materials?</p> <p>Would allocating the Site allow for local infrastructure for the management of waste higher up the waste hierarchy? (waste sites only)</p> <p>Are there any cumulative or synergistic effects on community vitality resulting from nearby planned developments?</p>				
14. To provide opportunities to enable recreation, leisure and	<p>Would development of the Site impact upon the ability of people to understand and enjoy a National Park?</p> <p>Will the Site allow an opportunity for recreation, leisure and learning through</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
learning	<p>development of the site including restoration or after-use?</p> <p>Would the Site if allocated / developed reduce access to / detract from the experience of recreation, leisure and learning opportunities including public rights of way?’</p> <p>Are there any cumulative or synergistic effects on recreation, leisure and learning resulting from nearby planned developments?</p>				
15. To protect and improve the wellbeing, health and safety of local communities	<p>Would development of the Site be likely to increase the level of noise, vibration, vermin, litter or other amenity impact experienced by local communities?</p> <p>Would dust from the Site likely to have an amenity or health impact?</p> <p>Would the Site or traffic levels associated with it be likely to cause any issues of severance to be experienced in communities or impair access to community facilities in any way?</p> <p>Would allocating the Site be likely to lead to increased danger to other road users or pedestrians?</p> <p>Would developing the Site obstruct access to any public rights of way or other routes?</p> <p>Would development of the Site be likely to have an impact on levels of crime in the area?</p> <p>Are there issues of land instability at the site?</p> <p>Are there any cumulative or synergistic effects on wellbeing, health and</p>				

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
	safety resulting from nearby planned developments?				
16. To minimise flood risk and reduce the impact of flooding	<p>Is the location of the Site likely to be susceptible to flooding?²⁰</p> <p>Is development at the Site likely to be classified as ‘water compatible’?</p> <p>Will allocating the Site increase the chances of flooding anywhere else?</p> <p>Could development or restoration of the Site reduce flooding in a catchment?</p> <p>Are there any cumulative or synergistic effects on flooding resulting from nearby planned developments?</p>				
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Would allocating the Site likely to support community led waste management schemes or increase public access to waste management? (waste sites only)</p> <p>Would development of the Site be likely to prevent other allocated development from taking place?</p> <p>Would the Site make a small or large contribution to self-sufficiency in minerals or waste supply?</p> <p>Are there any cumulative or synergistic effects on a changing population resulting from nearby planned developments?</p>				

²⁰ Much of the information in relation to flooding will come from strategic flood risk assessments

Proposed Sustainability Objective	Questions to Ask of Each Site ¹⁶	Key Facts for Consideration by the Assessment Panel and Initial Observations on Significance	Score ¹⁷		
			S	M	L
Score	Significance				
++	The Site option is predicted to have major positive effects on the achievement of the SA objective. For example, this may include a significant contribution to issues or receptor of more than local significance, or to several issues or receptors of local significance.				
m+	The Site option is predicted to have moderate positive effects on the achievement of the SA objective. For example, this may include a small scale contribution to issues or receptors of more than local significance, or a larger contribution to issues or receptors of local significance.				
+	The Site option is predicted to have minor positive effects on achievement of the SA objective. For example, this may include a significant contribution to an issue or receptor of more local significance.				
0	The Site option will have no effect on the achievement of the SA objective ²¹ .				
-	The Site option is predicted to have minor negative effects on the achievement of the SA objective. For example, this may include a negative contribution to an issue or receptor of local significance.				
m-	The Site option is predicted to have moderate negative effects on the achievement of the SA objective. For example, this may include a small scale negative contribution to issues or receptors of more than local significance, or a larger negative contribution to issues or receptors of local significance.				
--	The Site option is predicted to have major negative effects on the achievement of the SA objective. For example, this may include a significant negative contribution to an issue or receptor of more than local significance.				
?	The impact of the Site option on the SA objective is uncertain.				

²¹ This includes where there is no clear link between the site SA objective and the site

Sustainability Appraisal Report

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Policy M01- Broad geographical approach to supply of aggregates

The Plan area outside the North York Moors National Park, the Areas of Outstanding Natural Beauty and the City of York will be the main focus for extraction of aggregate (sand and gravel and crushed rock). Exceptions to this principle will be made for:

- 1) In the National Park and Areas of Outstanding Natural Beauty, the extraction of crushed rock aggregate where it is incidental to and would not compromise the supply of building stone extraction as the primary activity, and where the removal of crushed rock from the site will not compromise the high quality reclamation and afteruse of the site.
- 2) In the Areas of Outstanding Natural Beauty, the extension of time for the extraction of remaining permitted reserves at existing quarries and/or the limited lateral extension or deepening of existing quarries where necessary to help ensure continued operation of the site during the Plan period. Any proposals in these areas will need to demonstrate a particularly high standard of mitigation of any environmental impacts including, where practical, enhanced mitigation and higher-quality site reclamation compared with that required by the existing permission/s. Where proposals are considered to comprise major development the test for major development in Policy D04 will also need to be satisfied.
- 3) In the City of York area, the small scale extraction of sand and gravel where this is consistent with safeguarding the historic character and setting of the City.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					

								<p><u>Plan level / regional / wider effects</u> This preferred policy would provide protection to the National Park and AONBs (which are amongst the most biodiverse parts of the Plan area), though as the National Park and AONBs aren't likely to provide sand and gravel in any significant way, in practice this effect only relates to crushed rock. The policy would still allow for sites in AONBs to extend their working period and also incorporate lateral expansions. While negative effects from continued operation are likely to be relatively low level and often a continuation of extant effects (which will have mostly been managed down to acceptable levels), lateral extensions may in some cases negatively affect potentially biodiverse or geologically interesting areas (for instance some sites in AONBs lie close to woodland and local SINC sites). However the policy's insistence on a high level of mitigation and where possible enhancement should minimise effects.</p> <p>Other exceptions in the policy include for incidental crushed rock extraction at building stone sites, which is considered to be a neutral effect on biodiversity / geodiversity as the site footprint is not expected to be extended. Small scale extraction in York must comply with development control policies, which should moderate effects to a relatively small and temporary scale and ultimately achieve a net gain.</p>
2.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy would provide protection to the National Park and AONBs, though as the National Park and AONBs aren't likely to provide sand and gravel in any significant way, in practice this effect only relates to crushed rock. Water constraints are situated throughout the Plan area, so negative effects are likely to continue to occur as the wider Plan area outside of designated landscapes will be a focus. Incidental extraction in the National Parks and AONBs is unlikely to have a significant effect at a strategic level (though small scale locally negative effects may still occur).</p> <p>Lateral expansion and deepening of extant quarries in the AONB, and allowance of small sites in York may also heighten negative effects locally in those areas depending on the site and issues such as the depth of water table; however references to high standards of mitigation and the development control policies (e.g. Policy D09 on water) will ensure effects are reduced significantly.</p> <p>Overall effects are minor negative.</p>

3.	+	+	+		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Meeting the need for aggregates largely from outside of National Parks and AONBs is likely to have a minor positive effect on this objective as it will direct extraction closer to the main road networks and locations where they are likely to be used, though this effect is minor as it essentially only occurs in relation to crushed rock (as other aggregates are largely confined to the are outside of designated landscapes anyway). The policy also allows for small scale extraction close to York and incidental extraction in National Parks and deepening and lateral extension in AONBs, which is likely to help with local supply in these areas (preventing longer journeys).</p>
4.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option will protect air quality in the National Park, which is a part of its 'special qualities', as dust and transport impacts will be reduced. In the AONBs and York there is likely to be a continuation of effects into the longer term, though the policy offers strong mitigation for these areas. In the wider Plan area effects may increase very modestly if it attracts additional crushed rock extraction as a result of the policy, but such effects are generally local to sites and will be controlled to a large extent by other policies in the plan (i.e. the development control policies). Overall the policy is minor positive with some minor negative residual effects in the areas outside of designated landscapes</p>
5.	-	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Generally, land outside of the National Park and AONBs is of higher agricultural quality and therefore this option could lead to a low level loss of high quality agricultural land if crushed rock is sourced from the wider Plan area.</p>

6.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Meeting the need for aggregates from outside of National Parks and AONBs is likely to have a minor positive effect on this objective as it may direct some crushed rock extraction closer to the main road networks and locations where aggregates are likely to be used, thus reducing greenhouse gas emissions from transport. It may also to a small degree help avoid locating additional sites in areas which would cause the loss of carbon rich soils or habitats (which are more prevalent in protected landscapes), though extensions in AONBs may still cause the loss of minor carbon sinks.</p>
7.	0	0	0	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As sand and gravel will continue to be extracted from the wider Plan area any flood storage benefits and issues of increased flooding are likely to continue broadly as before, though there may be some additional crushed rock expansion in this area which may have local positive and negative effects. Broadly effects are considered insignificant.</p>
8.	0	0	0					<p><u>Local Effects</u> No effects noted.</p> <p><u>Plan level / regional / wider effects</u> There would be no effect as the preferred policy does not address the amount of or principle of aggregates extraction.</p>
9.	0	0	0					<p><u>Local Effects</u> No effects noted.</p> <p><u>Plan level / regional / wider effects</u> Although extraction can result in waste being produced, this policy is considering the strategic locations for extraction, not the principle or amount of extraction (so no effects on waste).</p>

10.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The rich historic environment of the National Park and AONBs would be protected from non-incidentally crushed rock extraction, and the allowance of the supply of incidental aggregate from building stone sites may help to keep some building stone sites viable (which is important for preserving historic buildings and architectural styles). Some minor negative impacts may still occur through extensions to sites in AONBs and small sites in the City of York Area, though the policy (and development management policies) provides for a high standard of mitigation.</p> <p>The wider Plan area also has a large amount of nationally and even internationally significant historic interest. Some additional crushed rock extraction may occur here as an indirect result of the policy. It is assumed that this would be mitigated to an extent by other policies in the plan (e.g. the development control policies)</p>
11.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to be positive for National Parks, but could cause some continuation of effects in AONBs, though high levels of mitigation would apply. Overall though crushed rock extraction in this area would decrease going forward as new sites wouldn't be permitted. Around the City of York small scale extraction may have small scale effects on the setting of the city and its Green Belt, though this would be moderated by the development control policies. Overall effects are likely to be slightly positive in this area.</p> <p>Elsewhere (i.e. outside designated landscapes and the City of York) there may be some additional crushed rock sites which could have largely local negative effects.</p>

12.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Overall, as this policy does not relate to the principle or amount of extraction, it is likely that the impact on employment and the economy would be around the same as the current situation. There may be slight positive effects through the protection of protected landscapes which might prevent possible future reductions in tourist spend close to sites in those areas.</p> <p>The provision of incidental crushed rock in the National Park and AONBs may help to support the viability and vitality of communities through job creation / retention at building stone quarries (very small scale effect).</p>
13.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whilst there may be localised effects on tourism associated with assets in the NYCC area, it is considered that the protection afforded to the National Park and AONBs (where quarrying could be particularly intrusive on the visitor experience) would result in minor positive effects on this objective.</p> <p>The provision of incidental crushed rock in the National Park and AONBs may help to support the viability and vitality of communities through job creation / retention at building stone quarries (very small scale effect).</p>

14.	+	+	m +	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would have minor positive effects on enjoyment and understanding of the National Park and recreation in AONBs, particularly if crushed rock aggregates extraction decreased in the National Park and AONBs (though at least a continuation of existing effects is likely to arise as quarries in the AONBs continue to be deepened, have their operating period extended or lateral extensions approved). Higher quality restorations in AONBs may also occur for extended / deepened sites.</p> <p>There could however be minor negative effects on recreation opportunities in the wider North Yorkshire planning area due to possible minor increases in crushed rock extraction, bearing in mind the extensive Rights of Way network and areas of open access land, although there may be positive effects in the longer term should quarry reclamation provide new recreational opportunities closer to population centres (as directed by the reclamation and after use proposed policy (D10) in the draft plan). Future small scale quarrying in York may have negative small scale negative effects which would be mitigated to a degree by development control policies.</p>
	-	-					
15.	?	?	?		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whether or not there are any effects on the health, safety and wellbeing of communities will depend upon the location of any quarries. There may be long term benefits from restoration/reclamation but again the benefits would depend on the location and the details of the restoration scheme.</p>
16.	0	0	0	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As aggregate will continue to be extracted from the wider Plan area any flood storage benefits and issues of increased flooding are likely to continue broadly as before, though there may be some additional crushed rock expansion in this area which may have local positive and negative effects. Broadly neutral.</p>

17.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may result in shorter supply chains by directing extraction towards the NYCC area where there is a greater concentration of users of aggregates.</p>

Summary of assessment This policy exhibits a range of different effects. In the main the sustainability objectives recorded minor positive effects for the protected landscapes in the Plan area. Some minor negative effects associated with crushed rock extraction were noted as the policy could shift location away from protected areas and into the remaining Plan area. There were positive benefits noted on tourism which benefit the economy and community vitality objectives. For the recreation objective, effects were mixed but became more positive in the longer term as quarry restorations are either enhanced, or possibly directed closer to more populated areas in the wider Plan area.

Recommendations: No recommendations are made.

Policy M02: Provision of sand and gravel

Total provision for sand and gravel over the 15 year period 1st January 2016 to 31st December 2030 will be 36.6 million tonnes, at an equivalent annual rate of 2.44 million tonnes.

Additional provision shall be made, through a mid-term review of provision in the Plan, if necessary to maintain a landbank of at least 7 years for sand and gravel at 31 December 2030 based on an annual rate of provision to be determined through the review.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of habitats / loss of geological features / and offsite impacts on wildlife receptors). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative. Effects grow more positive in the longer term due to restoration.</p>
		+	m +					

2.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of water bodies). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative.</p>
3.	m -	m -	m -		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative.</p>
4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic and dust). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as minor negative.</p>
5.	m -	m -	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall loss of land). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative. However, in the longer term many sites are restored so effects lessen.</p>
6.	--	--	--	✓			✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>A further 36.6mt of sand and gravel extraction would require an increased amount of energy to extract and transport the resource (and further release of carbon from soil loss. While other policies in the plan (e.g. development management policies) seek to mitigate this, the overall effect is still considered to be highly negative. As carbon in the atmosphere is cumulative this option works against the climate change objective.</p>
7.	+ -	+ -	+ +	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative in some ways (due to the overall risk of flooding and disturbance to ecological networks). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or positive, we have rated the combined impact as minor negative to positive and very positive in the longer term (due to flood storage potential).</p>
8.	--	--	--	✓		✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This would work against minimising the use of resources as effectively this would allow for a further 36.6mt of primary resources to be consumed at a steady rate. To some extent this policy is mitigated by policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that many secondary and recycled aggregates are not direct substitutes for sand and gravel.</p>
9.	-	-	-		✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>While an argument could be put that provisioning for primary aggregates at a substantial level might dis-incentivise the uptake of secondary and recycled aggregate, such materials are not necessarily good substitutes for primary aggregates, and to an extent operate as distinct markets as demand for primary aggregates is driven by demand for higher quality aggregates, whereas secondary and recycled materials tend to be for lower grade uses. However, this policy would work in combination with M11: 'Supply of Alternatives to Land Won Primary Aggregates' which would support supply infrastructure for this source of materials. Overall, minor negative.</p>
10.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of historic features features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative.</p>
11.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of landscape features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or moderate negative or neutral, we have rated the combined impact as moderate negative.</p>
12.	+	+	+	✓			✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This option is likely to have positive effects on economic growth as supply of minerals should be met in line with Plan area demand and demand for exports, with a review half way through the plan period to ensure sufficient provision going forward and that the 7 year landbank at 2030 is maintained. This will help underpin future development which is vital for economic growth, and incorporates a level of flexibility.</p>
13.	+	+	+		✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs) and partly negative (due to the overall range of effects on communities). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on community vitality are not highly cumulative.</p>
14.	-	-	-	✓		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of access). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or negligible negative or neutral, we have rated the combined impact as moderate negative. Restoration could mean that effects are positive in the longer term.</p>

15.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs) and partly negative (due to the overall range of effects on wellbeing). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on health and wellbeing are generally not highly cumulative</p>
16.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Continued provision of sand and gravel resources is likely to continue to open up opportunities for future flood storage as sand and gravel often occurs in the floodplain and is often restored to flood storage (growing highly positive in the longer term).</p>
17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The development needs of local communities are likely to continue to be supported by this objective.</p>

Summary of assessment. This Policy's effects are, in effect, the cumulative (in combination) effects of the Joint Plan as it relates to sand and gravel extraction, so many effects are either cumulatively negative, or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of sand and gravel restoration schemes in the longer term (e.g. flooding, recreation and health SA objectives). Some objectives report highly negative effects, as quarrying for

sand and gravel will inevitably involve the significant utilisation of materials and have a large carbon footprint (a carbon footprint is how much carbon dioxide is used up to make something, in this case saleable sand and gravel – carbon dioxide is a gas which contributes to global warming).

Recommendations. To some extent this Policy is mitigated by Policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that many secondary and recycled aggregates are not direct substitutes for sand and gravel. Further consideration of the potential contribution made by recycled and secondary aggregate is recommended when this policy is considered at the mid-term review of the Joint Plan, depending on the availability of reliable data.

Policy M03: Overall distribution of sand and gravel provision

Overall provision of sand and gravel will be allocated in the following proportions:

- Concreting sand and gravel (Southwards distribution area): 50%
- Concreting sand and gravel (Northwards distribution area): 45%
- Building sand: 5%

If it is not practicable to make overall provision in accordance with this ratio, through grant of permission on allocated sites, provision for concreting sand and gravel shall be made across both areas in combination.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	m -	m -	m -	✓	✓	✓	✓	<p>Note that while previous assessments (e.g. preferred options) made a prediction on the broad proportion of effects, the full effects of allocated sites are now known to the assessors, so this assessment is based on the actual effects of site allocations. Unlike policy M02's assessment, in this assessment we report findings that are linked to location rather than all cumulative effects.</p> <p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of habitats / loss of geological features / and offsite impacts on wildlife receptors). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative. Effects grow more positive in the longer term due to restoration.</p>
		+	m +					

2.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of water bodies). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative.</p>
3.	m -	m -	m -		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative.</p>
4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic and dust). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as minor negative.</p>
5.	m -	m -	m -		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

								with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall loss of land). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative. However, in the longer term many sites are restored so effects lessen.
6.	m -	m -	m -	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Although a greater emphasis on the south might lead to some savings in traffic and corresponding reductions in carbon from vehicles when compared to a northward distribution, the actual cumulative effect of the sites allocated is rated as high negative (see policy M02). However, in this assessment the focus is on locational effects (such as transport etc.) which we have rated as moderate negative after other policies are applied.
7.	+ -	+ -	+ +	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative in some ways (due to the overall risk of flooding and disturbance to ecological networks). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or positive, we have rated the combined impact as minor negative to positive and very positive in the longer term (due to flood storage potential).
8.	0	0	0					<u>Local Effects</u>

								<p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy does not affect the quantities of sand and gravel that might be extracted; rather it focusses on sand and gravel's broad spatial distribution. The effect is therefore neutral.</p>
9.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option does not affect the quantities of sand and gravel that might be extracted, and thus future waste generated, rather it focusses on sand and gravel's broad spatial distribution. The effect is therefore neutral.</p>
10.	m	m	m	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of historic features features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative.</p>
	-	-	-					
11.	m	m	m	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of landscape features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or moderate negative or neutral, we have rated the combined impact as moderate negative</p>
	-	-	-					
12.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>
	+	+	+					

								with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Planning for a 50:45:5 split would align the plan with current market demand (meaning more efficient transport of minerals and quicker delivery times). This will help keep costs down, and therefore businesses and quarry operators alike will benefit.
13.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs) and partly negative (due to the overall range of effects on communities). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on community vitality are not highly cumulative.
	-	-	-					
14.	-	-	m +	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of access). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or negligible negative or neutral, we have rated the combined impact as moderate negative. Restoration could mean that effects are positive in the longer term.
15.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a broad distribution for sand and gravel. Effectively the effects will be equivalent to the cumulative effects of allocated sites. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs) and partly negative (due to the overall range of effects on wellbeing). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on health and wellbeing are generally not highly cumulative</p>
16.	+	+	+	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Continued provision of sand and gravel resources is likely to continue to open up opportunities for future flood storage as sand and gravel often occurs in the floodplain and is often restored to flood storage (growing highly positive in the longer term).</p>	
17.	+	+	+	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Bringing sites closer to markets will help support the development needs of local communities as this should bring costs down.</p>	

Summary of assessment This policy's effects are, in effect the cumulative effects of the plan as it relates to the distribution of sand and gravel extraction, so many effects are either cumulatively negative, or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of sand and gravel restoration schemes in the longer term (e.g. flooding, recreation, health). Some objectives report neutral effects, as effects are more lined to the amount of material removed from the ground rather than locational factors (e.g. the material resources and waste objectives).

Recommendations No further mitigation is proposed. However, sites should implement recommendations made through the site assessment process.

Policy M04: Landbanks for sand and gravel

Assumptions - It is assumed that the southern distribution areas included sites more likely to serve the Leeds City Region

A minimum 7 year landbank for concreting sand and gravel will be maintained throughout the Plan period for each of the northwards and southwards distribution areas identified on the key diagram.

A separate minimum 7 year landbank will be maintained throughout the Plan period for building sand.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining separate seven year land banks in the north and south areas is likely to mean that in both areas permissions must be held at a level which meets expected requirements for at least the next seven years. In the longer term this could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may put additional pressure to approve sites in areas where cumulative effects on biodiversity are already starting to build. The net effect of this is, therefore, a cumulative but minor (considering other policies in the plan) negative effect for biodiversity / geodiversity.</p>
		-						
2.	0	0	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
		-						

							<p><u>Plan level / regional / wider effects</u></p> <p>Maintaining separate seven year land banks in the north and south areas is likely to mean that in both areas permissions must be held at a level which meets expected requirements for at least the next seven years. In the longer term this could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may put additional pressure to approve sites in areas where cumulative effects on water are already starting to build. The net effect of this is, therefore, minor negative for water quality, considering other policies in the plan.</p>
3.	0	0	0	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>As with the above objectives, in the medium term this could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may put additional pressure to approve sites in areas where cumulative traffic effects are already starting to build. The net effect of this is, therefore, minor negative for transport (considering other policies in the plan). However, market demand will ultimately dictate how much is extracted, so traffic may normalise (to the baseline) over time.</p>
4.	0	0	0	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>As this policy could lead to increased traffic in defined areas in the medium term (as is the case at objective 3), local air quality would be affected by the associated emissions of that traffic. However, market demand will ultimately dictate how much is extracted, so emissions may normalise (to the baseline) over time.</p>
5.	0	0	m	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u></p> <p>In the longer term this could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may increase pressure to approve sites in areas where cumulative effects on soils and land are already starting to build. The net effect of this is, therefore, negative for soils and land. Because the resource area for sand and gravel is mostly grade 2 or grade 3 agricultural land and effects on soils and land are more likely to be cumulative, the long term effect is rated moderate negative as impacts will be managed down by development management policies.</p>
6.	0	-	-	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This policy, because of its 7 year land bank requirement, will potentially require a greater amount of development (than not maintaining a land bank) to be permitted at any one time and in two separate distribution areas. This could bring forward some carbon emissions (which are considered to be permanent additions to the atmosphere in this assessment).</p>
7.	0	0	0				<p><u>Local Effects</u></p> <p>No clear link.</p> <p><u>Plan level / regional / wider effects</u></p> <p>No clear link.</p>
8.	--	--	--	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Maintaining a land bank is likely to decrease any incentive for reducing the use of resources.</p>
9.	--	--	--	✓		✓	<p><u>Local Effects</u></p>

							<p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining a land bank is likely to decrease any incentive for using recycled / secondary resources.</p>
10.	0	0	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining separate seven year land banks in the north and south areas is likely to mean that in both areas permissions must be held at a level which meets expected requirements for at least the next seven years. In the longer term this could mean that there is increased pressure to maintain the land bank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may put additional pressure to approve sites in areas where cumulative effects on the historic environment are already starting to build. The net effect of this is, therefore, a predicted cumulative minor negative effect (considering other policies) for the historic environment.</p>
11.	0	0	-				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining separate seven year land banks in the north and south areas is likely to mean that in both areas permissions must be held at a level which meets expected requirements for at least the next seven years. In the longer term this could mean that there is increased pressure to maintain the land bank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may put additional pressure to approve sites in areas where cumulative effects on the landscape are already starting to build. The net effect of this is, therefore, a predicted cumulative minor negative effect (considering other policies) for the landscape.</p>
12.	+	+	+		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would enable sufficient materials to be provided to support the economy and would also help to support jobs in the minerals sector.</p>

13.	0	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining separate seven year land banks in the north and south areas is likely to mean that in both areas permissions must be held at a level which meets expected requirements for at least the next seven years. In the longer term this could mean that there is increased pressure to maintain the land bank in defined (and therefore finite) areas (i.e. a northern or southern distribution area), which may detract from the tourism dividend enjoyed by some communities or, alternatively, may provide a source of local employment. The net effect of this is, therefore, mixed positive and negative effects for community vitality.</p>
14.	0	0	-	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As cumulative effects are identified as occurring on a number of recreational assets (e.g. landscape and biodiversity) elsewhere in this assessment, and are equally likely to occur to the access and green infrastructure network, effects are likely to become minor negative (considering other policies) in the longer term.</p>
15.	0	0	0		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Elsewhere in the assessment of this policy a number of factors that contribute or detract from health and wellbeing (e.g. traffic, air quality) have been identified as potentially deteriorating and then normalising. Other issues such as noise may also behave in the same way, as land banks in the two separate areas require maintaining. This may have temporary minor negative (considering other policies in the plan) effects on health and wellbeing objective.</p>
16.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>

17.	0	+	+	✓		✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Under this policy the maintenance of seven year land banks in separate areas is likely to positively impact on the needs of a changing population as it will help secure shorter supply chains for a key building material and will help development that supports changing communities through a more secure supply of building materials.</p>

Summary of assessment Impacts in relation to this Policy are largely neutral in the short term with minor negative impacts occurring in the medium to long term. This is because in the longer term separate northwards and southwards distribution area landbanks could mean that there is increased pressure to maintain the landbank in defined (and therefore finite) areas, which may put additional pressure to approve sites in areas where cumulative effects on are already starting to build. Higher negative impacts have been recorded in relation to minimising resource use and prioritising management of waste as high up the waste hierarchy as practicable as maintaining a landbank is likely to reduce the incentive to work towards these objectives. Positive impacts have been identified in relation to the economy and meeting the needs of a changing population as this Policy would ensure that adequate resources are available to support growth.

Recommendations No further mitigation is proposed.

Policy M05: Provision of crushed rock

Total provision for crushed rock over the 15 year period 1st January 2016 to 31st December 2030 shall be 56.3 million tonnes, at an equivalent annual rate of 3.75 million tonnes, within which specific provision for a total of 22.5 million tonnes at an equivalent annual rate of 1.50 million tonnes per annum shall be for Magnesian Limestone.

Additional provision shall be made through a mid-term review of provision in the Plan, if necessary, in order to maintain a minimum 10 year landbank of crushed rock, including a separate minimum 10 year landbank for Magnesian Limestone, at 31 December 2030 based on an annual rate of provision to be determined through the review.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of habitats / loss of geological features / and offsite impacts on wildlife</p>
		+	m +					
			?					

								<p>receptors). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative. Effects grow more positive in the longer term due to restoration.</p> <p>However, additional sites in the Magnesian limestone area in particular may increase pressure in an area known for ecological importance which could cause effects to rise,</p>
2.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of water bodies). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as moderate negative.</p>
3.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative.</p> <p>Taking an even wider perspective could lead to the conclusion that this policy, despite significant traffic effects, does at least replace other non-local sources of crushed rock even further afield. However we have assumed that while this policy enables more transport, and many dispersed plan level effects are observed, a baseline without the plan would essentially produce possibly worse effects as they would not be managed down by local development management policies. So, this policy's effects are simply less negative than that scenario.</p>

4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall generation of traffic and dust). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as minor negative (as effects like dust generation are often quite local and not cumulative over broad scales).</p>
5.	m	m	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall loss of land). However, as development management policies and the individual site mitigation measures moderate impacts down, we have rated the combined impact as moderate negative. However, in the longer term many sites are restored so effects lessen.</p>
6.	--	--	--	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> A further 56.3 million tonnes crushed rock extraction would require an increased amount of energy to extract and transport the resource (and further release of carbon from soil loss. While other policies in the plan (e.g. development management policies) seek to mitigate this, the overall effect is still considered to be highly negative. As carbon in the atmosphere is cumulative this option works against the climate change objective.</p>
7.	-	-	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative in some ways (due to the overall risk of flooding and disturbance to ecological networks). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative, we have rated the combined impact as minor negative to positive in the longer term (due to potential to integrate ecological networks into restoration)</p>
8.	--	--	--	✓		✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This would work against minimising the use of resources as effectively this would allow for a further 56.3 million tonnes of primary resources to be consumed at a steady rate. To some extent this policy is mitigated by policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that some secondary and recycled aggregates are not direct substitutes for different crushed rock types.</p>
9.	-	-	-			✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>While an argument could be put that provisioning for primary aggregates at a substantial level might dis-incentivise the uptake of secondary and recycled aggregate, such materials are not necessarily good substitutes for primary aggregates, and to an extent may operate as distinct markets, depending on use. However, this policy would work in combination with M11: 'Supply of Alternatives to Land Won Primary Aggregates' which would support supply infrastructure for this source of materials. Overall, minor negative.</p>
10.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of historic features features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have</p>

								rated the combined impact as moderate negative. However, additional sites in the Magnesian limestone area in particular may increase pressure in an area known for archaeological significance which could cause effects to rise,
11.	m -	m -	m -	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of landscape features). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or moderate negative or neutral, we have rated the combined impact as moderate negative.</p> <p>However, additional sites in the Magnesian limestone area in particular, but also in some other crushed rock areas, may increase cumulative pressure in areas known for landscape significance, which could cause effects to rise.</p>
12.	+	+	+	✓			✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This option is likely to have positive effects on economic growth as supply of minerals should be met in line with Plan area demand and demand for exports, with a review half way through the plan period to ensure sufficient provision going forward and that the 10 year landbank at 2030 is maintained. This will help underpin future development which is vital for economic growth, and incorporates a level of flexibility.</p>
13.	+	+	+		✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs) and partly negative (due to the overall range of effects on communities). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on community vitality are not highly cumulative.</p>
14.	-	-	-	✓		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is inevitably negative (due to the overall disturbance of access). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor or negligible negative or neutral, we have rated the combined impact as moderate negative. Restoration could mean that effects are positive in the longer term.</p>
			m +					
15.	-	-	-		✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The policy sets out a total amount of provision and a land bank. Effectively the effects will be equivalent to the cumulative effects of allocated sites plus any windfall sites that meet the total provision. Taken together as a single effect the effect is partly positive (due to the benefits of minerals jobs and restoration schemes) and partly negative (due to the overall range of effects on wellbeing). However, as development management policies and the individual site mitigation measures moderate impacts mostly down to minor negative or neutral, we have rated the combined impact as minor negative to minor positive as effects on health and wellbeing are generally not highly cumulative.</p>
			+					
16.	0	0	0					<p><u>Local Effects</u></p>

								<p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Continued provision of crushed rock resources may open up some very limited opportunities for future flood storage but this is considered relatively insignificant here.</p>
17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The development needs of local communities are likely to continue to be supported by this objective.</p>

Summary of assessment This Policy's effects are, in effect the cumulative effects of the Joint Plan as it relates to crushed rock extraction, so many effects are either cumulatively negative, or cumulatively mixed negative and positive. Some objectives also benefit from the cumulative effect of site restoration schemes in the longer term (e.g. flooding, recreation, health). Some objectives report highly negative effects, as quarrying for crushed rock will inevitably involve the significance utilisation of material resources and have a large carbon footprint. Uncertainty is also noted later in the plan period and there may be increased pressure from additional sites, particularly in the Magnesian limestone area, which would affect the biodiversity, landscape and historic environment objectives.

Recommendations The policy is already well mitigated by development management policies and to some extent this policy is partly mitigated by Policy M11 which encourages alternatives to land won primary aggregate, though it is acknowledged that many secondary and recycled aggregates are not direct substitutes for crushed rock. Further consideration of the potential contribution made by recycled and secondary aggregate is recommended when this Policy is considered at the mid-term review, depending on the availability of reliable data.

Policy M06: Landbanks for Crushed rock

A minimum overall landbank of 10 years will be maintained for crushed rock throughout the Plan period. A separate minimum 10 year landbank will be identified and maintained for Magnesian Limestone crushed rock.

Where new reserves of crushed rock are required in order to maintain the overall landbank above the 10 year minimum period these will be sourced from outside the National Park and Areas of Outstanding Natural Beauty.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Should additional Magnesian Limestone extraction be permitted, along with additional reserves of other crushed rock resources in the longer term, depending on location, there could be additional effects on biodiversity, over and above any resulting from planning permissions already granted, in particular there are a number of SINCs in areas of Magnesian limestone towards the south of the Plan area. In the longer term there may be opportunities for enhancements for biodiversity through site reclamation. Providing new reserves of crushed rock outside of the National Park and the AONBs would have positive effects for habitats and wildlife as many of the SACs, SPAs and SSSIs lie within these areas, thus protecting the highest level of designated sites.</p>
			+					
			+					
2.	0	0	--	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> In the longer term there could be additional effects on water quality and supply, over and above any resulting from planning permissions already granted, in particular as the Magnesian Limestone resource coincides with Nitrate Vulnerable Zones and Groundwater Source Protection Zones in a number of places. As the Nitrate Vulnerable Zones and Groundwater Source Protection Zones are generally in the area outside of the National Park and the AONBs, this option may also result in additional pressure for extraction within NVZs and GSPZs.
3.	0	0	-	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> In the longer term, should additional reserves be permitted to maintain the Magnesian limestone and crushed rock land banks, this would result in more traffic movements and associated effects. However, under this policy extraction would take place closer to users of the resource and closer to the main road network, both of which largely exist outside of the National Park and AONBs. Overall long term impacts are considered to be neutral to minor negative.
4.	0	0	-	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Should additional Magnesian limestone extraction be permitted, along with additional reserves of other crushed rock resources in the longer term, this could result in additional localised air quality issues. Under this option air quality would be protected in the National Parks and AONBs; this is particularly important in the National Park as clean, unpolluted air is one of the Park's special qualities. Impacts are considered to be a combination of minor positive and minor negative.
5.	0	0	--	✓		✓	<u>Local Effects</u>

							<p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Negative effects may arise under this option as much of the Magnesian limestone resource is in areas of Grade 2 agricultural land quality. This policy would also direct extraction away from the lower quality agricultural land of the designated areas and towards the higher quality land.</p>
6.	0	0	m -		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the longer term should additional reserves be permitted to maintain the Magnesian limestone landbank this would result in more traffic movements and associated effects. However, under this policy extraction would take place closer to users of crushed rock and closer to the main road network, both of which largely exist outside of the National Parks and AONBs, thus reducing greenhouse gas emissions. Overall moderate negative.</p>
7.	0	0	0	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Should a greater level of reserves be needed to maintain the land banks, once these quarries close there could be increased opportunities for water storage to help reduce flood risk (albeit in areas lower down the catchment as development in the National Park and AONBs would not be permitted). Impacts are considered to be neutral in the short and medium term and negligible positive in the long term.</p>
8.	--	--	--	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining a landbank is likely to decrease any incentive for reducing the use of resources.</p>
9.	--	--	--	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining a landbank is likely to decrease any incentive using previously used resources.</p>

10.	0	0	--	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the longer term there could be additional effects on the historic environment, over and above any resulting from planning permission already granted, in particular there are a number of historic assets in areas of Magnesian limestone resource.</p>
			?					
11.	0	0	-	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the longer term should additional reserves be permitted this would have effects on the landscape although it is not possible to identify the scale, location and significance of any effects though providing additional landbanks of Magnesian limestone could have effects on the setting of the Nidderdale AONB. By requiring landbanks to be met from outside the National Park and AONBs, this policy would help to protect the designated landscapes of greatest importance within the Plan area. Impacts are a mix of minor to major negative for those areas outside of the National Park and AONBs and highly positive for the designated landscapes.</p>
			--					
			+					
			+					
12.	0	0	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would enable sufficient materials to be provided to support the economy, in particular through providing for a landbank of Magnesian limestone, and would also help to support jobs in the minerals sector. By requiring landbanks to be met from outside the National Park and AONBs, this policy would see jobs in the minerals sector being provided closer to the larger centres of population.</p>
			+					
			+					
			+					
13.	0	0	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
			+					
			+					

								<p><u>Plan level / regional / wider effects</u> Whilst this policy would have positive effects on jobs and local economies it could have negative effects on the tourism economy by affecting visitors to local tourism assets. On the other hand, this policy may result in jobs in the minerals sector being provided closer to the larger centres of population and away from the sensitive tourism economies of the National Park and AONBs. Conversely, crushed rock extraction currently provides local jobs within the AONBs, so by not supporting any further extraction in these areas, a negative impact on community viability and vitality may occur. Mixed positive and negative effects.</p>
14.	0	0	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the longer term should additional reserves be permitted this could have effects on recreation assets although it is not possible to identify the scale, location and significance of any effects. In the longer term there may also be opportunities for enhancements for recreation through site reclamation.</p> <p>This option is also likely to have positive effects on recreation opportunities in National Parks and AONBs as minerals extraction can have negative effects on the recreational activities.</p>
			+					
15.	0	0	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Should additional Magnesian limestone extraction be permitted, along with additional reserves of other crushed rock resources in the longer term, this could have effects on the health and wellbeing of communities although it is not possible to identify the scale, location and significance of any effects. By requiring landbanks to be met from outside the National Park and AONBs, this policy could have positive effects by directing quarries, and therefore traffic, away from the generally minor road network in the National Park and AONBs.</p>
			+					
16.	0	0	0	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Should a greater level of reserves be needed to maintain the landbanks, once these quarries close there would be increased opportunities for water storage to help reduce flood risk (albeit in areas lower down the catchment as development in the National Park and AONBs would not be permitted). Impacts are considered to be neutral in the short and medium term and negligible in the long term.
17.	0	0	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option enables the types of crushed rock needed to come forward to support development, particularly recognising a potential shortfall in Magnesian limestone. As crushed rock would be extracted from areas outside of the National Park and AONBs, this policy may result in a shortened supply chain as crushed rock would be supplied from quarries closer to main centres of population.

Summary of assessment This Policy could have longer term negative effects on the environment, including biodiversity / geodiversity, air and water quality, landscape, resource use, minimising waste and the historic environment, and communities of the Plan area should these landbanks result in the need to release more land for extraction than is currently permitted. The Policy would however, enable a level of minerals supply to meet demand for development and therefore would result in major positive impacts in relation to the economy and meeting the needs of a changing population. By requiring new reserves of crushed rock to be sourced from outside the National Park and AONBs, this Policy would result in some positive effects for these designated areas particularly relating to landscape, recreation and tourism, cultural heritage and amenity. Some negative impacts may occur in these designated landscapes as there would be a decrease in local job opportunities.

Recommendations No mitigation is proposed.

Policy M07: Meeting concreting sand and gravel requirements

Requirements for concreting sand and gravel will be met through existing permissions and the grant of permission on sites and areas identified in the Joint Plan for working.

Part 1) Sand and gravel (northwards distribution) site allocations:

i) Allocations required in order to meet requirements during the Plan period:

Land at Killerby (MJP21)

ii) Allocations potentially required to contribute to maintenance of an adequate landbank at 31 December 2030. Permission will not be granted for development of these allocations prior to 2025, unless there is a shortfall in the sand and gravel landbank in the northwards distribution area or there is a shortfall in production capacity in the northwards distribution area requiring the release of additional sites for working:

Land at Home Farm, Kirkby Fleetham (MJP33);
Land South of Catterick (MJP17).

Proposals for development of these sites will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

Part 2) Sand and gravel (southwards distribution) site allocations and Areas of Search:

i) Allocations required in order to meet requirements during the Plan period:

Land at Langwith Hall Farm (MJP06);
Land at Pennycroft and Thorneyfields, Ripon (MJP14);
A Preferred Area on land at Oaklands (MJP07).

Proposals for development of these sites will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

ii) Areas of Search for concreting sand and gravel are identified as shown on the key diagram. Planning permission will be granted for development of sites within an Area of Search where necessary in order to maintain an adequate landbank at 31 December 2030 in the southwards distribution area and the need cannot be met through development of allocated sites or preferred areas. Permission will not be granted for development within these Areas of Search prior to 2025, unless there is a need for the earlier release of further reserves in order to maintain an adequate landbank or there is a shortfall in production capacity in the southwards distribution area requiring the release of additional sites for working.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							Extraction of sand and gravel from the sites and Areas of Search specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Report.

Summary of assessment A wide range of impacts will result from extraction of sand and gravel at the sites and Areas specified in this Policy. These are outlined in the Site Sustainability Appraisal and Areas Assessment Appendices to the main SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

Recommendations Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site / Area Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M08: Meeting building sand requirements

Requirements for building sand will be met through existing permissions and the grant of permission on sites allocated in the Joint Plan for working.								
Building sand allocations:								
<p>Land at Hensall Quarry (MJP22) Land at West Heslerton Quarry (MJP30) Land adjacent to Plasmor blockworks, Great Heck (MJP44) Land at Mill Balk Quarry, Great Heck (MJP54)</p>								
Proposals for the development of these sites will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.								
<i>SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs</i>								
SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							Extraction of sand from the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Appendix.

Summary of assessment A wide range of impacts will result from extraction of sand at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix to the full SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

Recommendations Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M09: Meeting crushed rock requirements

Requirements for Magnesian Limestone over the Plan period will be met through existing permissions and the grant of permission on sites allocated in the Joint Plan for working.

Magnesian Limestone allocations:

Part 1) Allocations required in order to meet requirements during the Plan period:

Land at Jackdaw Crag South, Stutton (MJP23)
 Land at Barnsdale Bar Quarry (MJP28)
 Land at Went Edge Quarry, Kirk Smeaton (MJP29)

Part 2) Allocations required to contribute to maintaining an adequate landbank at 31 December 2030:

Land at Gebdykes Quarry (MJP11)
 Land at Potgate Quarry (MJP10)

Maintenance of supply of crushed rock is also supported through the identification of allocated sites at:

Land at Settrington Quarry (MJP08) (Jurassic Limestone)
 Land at Darrington Quarry (MJP24) (retention of processing plant site and haul road)

Proposals for the development of sites identified in this Policy will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							Extraction of crushed rock from the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Appendix.

Summary of assessment A wide range of impacts will result from extraction of crushed rock at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix to the main SA report. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

Recommendations Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings for each site and with other policies in the Joint Plan. Cumulative impacts should be given particular regard through the planning application process.

Policy M10: Unallocated extensions to existing quarries

Proposals for extensions to minerals extraction sites on land not allocated for working in the Joint Plan will be permitted subject to the following criteria;

- i) If the site is in the National Park or an AONB, the requirements for major development in Policy D04 are complied with;
- ii) The development would not compromise overall delivery of the strategy for the sustainable supply and use of minerals, including encouraging the use of alternatives to primary minerals;
- iii) The development would be consistent with the development management policies in the Joint Plan.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy, through requiring the major development test in National Parks and AONBs and requiring consistency with development management policies (including DO7: 'Biodiversity and Geodiversity' and D10: 'Reclamation and Afteruse' in particular) is expected to have positive impacts on this SA objective, particularly as some of the most protected biodiversity and geodiversity lie in protected landscapes. In the medium to longer term, permitting extensions may delay any opportunities for enhancements for biodiversity through site reclamation, though this may ultimately be better than requiring new sites to deliver minerals.</p>
		-	-					
2.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy, through requiring the major development test in National Parks and AONBs and requiring consistency with development management policies everywhere (including DO9: Water Environment), is expected to</p>
	0	0	0					

							have neutral to positive (in designated landscapes) impacts on this SA objective.
3.	+	+	+		✓	✓	<p>✓</p> <p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy option would to some extent reduce the need for new sites which is positive. As existing sites would be extended, those sites would benefit from existing supporting infrastructure (such as buildings, processing facilities and access roads). This is in contrast to new sites, all of which would generate a quantum of vehicle journeys to build new supporting infrastructure. However, the preferred policy may also extend the duration of operational traffic impacts at existing sites or even increase traffic (depending on the size and timing of the extension).</p> <p>However, traffic would be moderated by the requirement for extensions to be consistent with the strategy for the sustainable supply of minerals, as well as the 'Transport' development management policy (D03).</p>
	-	-	-				
4.	+	+	+		✓	✓	<p>✓</p> <p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be localised impacts on air quality (including an extension of the time that local receptors would be subject to factors such as dust and traffic pollution) around extended sites (which would be most likely outside of protected landscapes). However, for the same reasons as objective 3 there may be some positive effects on traffic from the policy, and because of the policy's requirement to consider development management policies. This would include policy D02 'Local Amenity and Cumulative Impacts'.</p>
	-	-	-				
5.	+	+	+		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-				

								<p><u>Plan level / regional / wider effects</u> Under this policy permitting extensions would result in more land take equalling more loss of soil and agricultural land. Over time the cumulative effects would become greater. However, the development management policy D12 for 'Protection of Agricultural Land and Soils' would be applicable, which would moderate effects significantly and make them more likely to be temporary effects. Minor negative¹. To some degree the need for new sites (which would also require new supporting infrastructure) would be lessened (which is positive).</p>
6.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There is the likelihood of additional / extended vehicle movements under this preferred policy option (which cumulatively adds to climate change), though at the same time the carbon footprint of new minerals sites would be avoided as extended sites may benefit from existing supporting plant and infrastructure (as opposed to requiring new plant and infrastructure at a new site). Overall the impact is considered to be minor negative, though there is considerable uncertainty over the extent to which the carbon benefits of making the best use of existing infrastructure offsets the transport effects.</p>
7.	0	-	-			✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the medium to long term, permitting extensions may delay any opportunity for quarries to be used for flood water storage.</p>

¹ Arguably a case might also be made that if this policy didn't exist then development would come through either new site allocations or new unallocated sites. However, this argument to some extent ignores the economics of quarrying, in that a new site may be considerably more expensive than extending a site which already has plant and traffic access.

8.	-	-	-		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Permitting extensions may not help with promoting the use of secondary and recycled materials, and would consume a non-renewable resource, although this preferred policy option recognises that there would be a requirement for extensions to not undermine the potential for a greater proportion of minerals to be supplied from alternative sources (through not compromising overall delivery of the strategy for the sustainable supply and use of minerals).</p>
9.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
10.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> While the policy requires the major development test (where applicable) in National Parks and AONBs, which are rich in historic assets, it is still possible that there may be impacts on the historic environment elsewhere (as the area outside of designated landscapes is often also rich in historic assets). However, this would depend upon the location of any extension in relation to historic assets. The development management policy D08 'Historic Environment' would also lessen most effects.</p>
11.	m	m	m	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As this policy option offers protection to protected landscapes through the major development test and also requires consistency with the development management policies, including D06 'Landscape', the effect is positive (as it will reduce the amount of landscape incompatible extensions that would without this policy be permitted). However, locally there are likely to be residual negative effects after these policies have been applied as any unallocated extension is likely to alter the landscape in some way.</p>

12.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy option additional minerals would be provided which may have a positive effect on the economy through additional / extended jobs being provided in the minerals sector. Tourism in the National Park and AONBs may also be protected through the stringency of the major development test requirements. In addition, it would allow quarry operators the chance to maximise the return on existing investments made in infrastructure at quarry sites. However, allowing unallocated extensions may, in the longer term, lead to a reduced need for new sites somewhere else, effectively displacing future job creation (uncertain).</p>
13.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy, additional jobs may be provided in the minerals sector which would contribute positively towards this objective. As with objective 12, tourism jobs and revenue would also be protected. However, there may be continued (or increased) traffic at a local level, which may affect community vitality to a degree. Allowing unallocated extensions may, however, in the longer term lead to a reduced need for new sites somewhere else, effectively displacing future job creation.</p>
14.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy provides protection, through the major development requirements, to the nationally important recreational assets of the National Park and AONB. However, it is possible that there may be impacts on the recreational opportunities elsewhere in the Plan area, but this would depend upon the location of any extension in relation to recreational assets such as rights of way (uncertain). Effects may become greater over time as cumulatively more assets are affected. In the medium to longer term permitting extensions may delay any opportunities for enhancements for recreation through site reclamation.</p>

15.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy there may be negative effects on the health and safety of communities / residences close to extended quarries through additional / extended noise, traffic, dust etc. However, this effect would be moderated by the policy D02 'Local Amenity and Cumulative Impacts' so that any impacts would be small scale.</p>
16.	0	-	-		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> In the medium to long term, permitting extensions may delay any opportunity for quarries to be used for flood water storage.</p>
17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred option would have positive effects on the supply of minerals which would help to enable new development to come forward.</p>

Summary of assessment. For most SA objectives this Policy results in mixed positive and negative effects. This is because the option allows unallocated extensions to sites, which would ordinarily result in a range of negative environmental and social effects (largely because it will either extend or increase issues that affected areas surrounding quarries during the lifetime of the quarry). However, the Policy does include a number of safeguards against this that should lessen effects and make sites more sustainable, not least the major development test and the reference to consistency with development control policies. The Policy would also offset the need for some new sites to be developed.

Some objectives vary from this pattern slightly. For instance, for the climate change objective the extended negative traffic impacts at sites are seen as outweighing the benefits of making use of existing infrastructure at site (though there is considerable uncertainty here), while the soils objective notes the loss of

land / soils that is potentially allowed by this Policy. Similarly, although this option might reduce the need for new sites elsewhere to some degree, there will be jobs and revenue / viability benefits from allowing site extensions, as well as benefits to tourism that will result from the protections afforded to protected landscapes in the Policy. This leads to strongly positive effects on the economy objective. Other objectives where positives outweigh the negative, or are positive in their own right are the landscape and changing population needs objectives.

Recommendations. This policy is largely already mitigated for by the Development Management Policies. No further mitigation is proposed.

Policy M11: Supply of alternatives to land won primary aggregates

Proposals which would facilitate the supply and use of secondary, recycled and marine aggregate as an alternative to primary land-won aggregate will be permitted including:

- 1) The development of appropriately scaled new ancillary infrastructure, including ancillary manufacturing facilities, using secondary aggregate as the primary raw material, at sites where secondary aggregates are produced, or marine aggregates imported;
- 2) The supply of secondary aggregate from waste disposal sites provided it would not involve disturbance to restored ground or a landscaped feature which has become assimilated into, or is characteristic of, the local landscape, or is of archaeological value;
- 3) The separation of materials with potential for re-use or recycling as aggregate during waste management activity and the maximum recovery of recycled aggregate during demolition activity;
- 4) The use of appropriately located aggregates mineral extraction sites, and sites for the transport of minerals, as locations for the ancillary reception, processing and onward sale of recycled aggregate during the associated period of minerals extraction at the site.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
			?					

							<p><u>Plan level / regional / wider effects</u></p> <p>This policy would have benefits for biodiversity as it would help reduce the land take and environmental impacts, and thus biodiversity and geo-diversity impact, of primary extraction sites by increasing the supply of secondary and recycled aggregates (an indirect effect).</p> <p>It would also protect against the disruption of agreed restoration of waste disposal sites by allowing for supply from unrestored sites but requiring that it would not involve disturbance to restored land.</p> <p>Some gains for biodiversity / geo-diversity would be offset; however, as restoration opportunities at primary minerals sites are foregone and new infrastructure for processing recycled aggregates is built.</p> <p>Uncertainty will increase in the longer term as supply of secondary aggregates may or may not decrease, depending on the source of those secondary aggregates.</p>
2.	+	+	+		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This preferred policy would reduce many of the water impacts associated with primary extraction (indirect effect). However, processing of construction aggregates may require washing processes that demand water. There is also water impacts associated with the use of secondary aggregates; particularly materials such as colliery spoil. While these are required to be in an inert state when used in construction, during working and processing care will need to be taken to avoid sensitive receptors for water pollution.</p>
	-	-	-				
3.	+	+	+	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
			?				

							<p><u>Plan level / regional / wider effects</u></p> <p>Broadly effects are positive as secondary aggregate sources tend to be relatively close to the major areas of demand around large population centres in the south of the Plan area. In addition, construction and demolition waste is likely (though not always) to be used relatively close to where it is sourced (as urban areas tend to be key sources of CDE waste and also the key consumers of it – particularly where mobile plant is employed). This all reduces the demand for long journeys made by road.</p> <p>Uncertainty will increase in the longer term as supply of secondary aggregates may or may not decrease, depending on the source of those secondary aggregates.</p>
4.	-	-	-		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>In terms of air quality, there may be localised dust issues around recycled aggregates processing sites and sources of secondary aggregate such as spoil tips, and there will be a need to ensure construction waste received at processing facilities is inert (dealt with through the environmental permitting regime) though there is the prospect that emissions from transport could be less.</p>
5.	+	+	+		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The offsetting of future primary minerals extraction by this option will lead to benefits to soils and land take. Uncertainty will increase in the longer term as supply of secondary aggregates may or may not decrease, depending on the source of those secondary aggregates.</p>

6.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy will reduce the embodied energy of aggregates (as a waste rather than a primary resource is utilised) and is considered to be likely to reduce transport (though there remains some uncertainty here). It will also reduce land take of both extraction and disposal. These things taken together will lead to positive effects on the climate change objective. These benefits may decline in the longer term if the supply of sources of secondary aggregates declines.</p>
			?					
7.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
8.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Using recycled and secondary aggregate saves the equivalent amount of primary aggregate from being used up. The only limiting factor is the quantity used.</p> <p>The effects are more uncertain in the long term as the supply of colliery spoil may run out.</p>
			?					
9.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
			?					

								<p><u>Plan level / regional / wider effects</u></p> <p>This policy would recycle or reuse a range of construction and demolition materials and utilise secondary aggregate preventing future landfilling, and offsetting future generation of more waste (that results from primary extraction). This would lead to major beneficial effects on the waste SA objective.</p> <p>The effects are more uncertain in the long term as the supply of colliery spoil may run out.</p>
10.	-	-	-	✓		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The landscape character of a number of areas within North Yorkshire (including large areas within the North York Moors National Park) and the significance of some of its heritage assets is the result of previous extractive and industrial activities. In these areas, the waste from these processes now contributes to the distinctive character of the local area, it may be of archaeological importance, and can also, potentially, contribute to understanding of past industrial activity. It is important, therefore, that any proposals for reworking such areas are carefully examined against the potential harm they might have upon those elements which contribute to the landscape character and the significance of heritage assets.</p> <p>On the other hand, indirectly this policy would help prevent reduce future extraction, which is positive for the historic environment.</p>
	+	+	+					
	?	?	?					
11.	+	+	+	✓		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Harm to landscapes resulting from the visual intrusion of quarries will be lessened as recycled and secondary aggregates offset some of the demand for primary aggregates. This is countered to an uncertain degree by the possibility that new built infrastructure may be required to support this objective.</p>
	?	?	?					
12.	0	0	0		✓	✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> This policy will have a broadly neutral effect as jobs may be created in recycled and secondary aggregates as demand reduces for primary extraction and the jobs connected with it.</p>
13.	0	0	0		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					<p><u>Plan level / regional / wider effects</u> This policy will have a broadly neutral effect on community vitality as jobs may be created in recycled and secondary aggregates as demand reduces for primary extraction and the jobs connected with it. This will help boost levels of spend in some communities, and will reduce levels of spend in others.</p>
			?					<p>Issues around sites for storing and processing secondary aggregate, such as traffic and dust may, however, work against the objective. To a degree this will be mitigated by other policies in this Plan (such as the amenity / cumulative effects policy).</p> <p>The situation becomes less certain in the longer term if the supply of sources of secondary aggregates declines.</p>
14.	0	0	0					<p><u>Local Effects</u> No significant effects noted</p>
								<p><u>Plan level / regional / wider effects</u> There is no significant relationship between this option and the recreation, leisure and learning objective.</p>
15.	0	0	0		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					
			?					

								<p><u>Plan level / regional / wider effects</u></p> <p>Promoting recycled aggregates will not in itself lead to negative effects on health and wellbeing, though there may be local negative effects around new facilities resulting from noise, dust and road journeys. However, as this option reduces demand for primary minerals, there will be a reduction in the health effects associated with those sites. A certain amount of concentration of impacts are expected to occur close to secondary aggregate sites (particularly from dust) in the short and medium term which may tip the balance away from neutral towards negative. This may affect wellbeing levels though this will be mitigated to a degree by other policies in this Plan (such as the amenity / cumulative effects policy). Much depends on the availability of sources of secondary aggregates in the future as to whether such impacts will continue to the long term.</p>
16.	?	?	?					<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The risk from flooding will depend on the location of individual sites (see also site assessment for the flood risk associated with individual sites).</p>
17.	+	+	+			✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This would help sustain future supplies of minerals.</p> <p>The effects are less certain in the long term as the supply of colliery spoil in particular may run out</p>

Summary of assessment For most of the SA objectives positive effects arise because supporting the use of secondary and recycled aggregates would offset the need to extract primary aggregates (and the negative effects associated with this). Some SA objectives report neutral effects as impacts associated with primary extraction are simply shifted to new locations. However, the health and wellbeing and community vitality objectives note some additional negative effects associated with the dusty nature of some secondary aggregates, while the water objective recognises the potential for water pollution from the storage and processing of some secondary aggregates (which would be dealt with via the environmental permitting regime). There are also uncertainties associated with the supply of secondary aggregates such as colliery spoil (particularly if sources of colliery spoil cease).

Recommendations

This Policy is largely mitigated by other policies in the plan (particularly D02 Local Amenity and Cumulative Impacts) as well as the environmental permitting / pollution control regime. However, monitoring of the supply of secondary and recycled aggregates is recommended due to uncertainties over supply.

Policy M12: Continuity of supply of silica sand

- 1) Proposals for the continuing extraction of silica sand at Burythorpe Quarry, including proposals for lateral extensions or deepening, will be supported in principle where necessary to maintain reserves during the period to 31 December 2030 and a minimum 10 year landbank for the site.
- 2) Proposals for development of silica sand resources at Blubberhouses Quarry, including proposals to extend time to complete existing permitted development or proposals for lateral extensions or deepening, will be supported in principle subject, where relevant, to compliance with the requirements for major development in Policy D04, compliance with the Habitats Regulations and compliance with other relevant development management policies. Any proposals will need to demonstrate a very high standard of mitigation of any environmental impacts and high quality restoration, including protection of peat resources.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Burythorpe is adjacent to areas of priority habitat (deciduous woodland) so lateral extensions and a landbank could have a detrimental effect on this habitat and the species associated with it if the woodland is lost. However, compliance with development management policies (particularly for biodiversity and geodiversity) should mitigate effects and seek to achieve a net gain. Nonetheless, a negative effect is recorded as loss of woodland would take significant amount of time to recover from. Minor negative.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. Effects on biodiversity included possible impacts on the nearby North Pennine Moors SAC, impacts on protected species, impacts on blanket bog and impacts on deep peat (overall rated as minor negative with some benefits likely through restoration). Lateral extensions could elevate these effects significantly. However, it is considered that the biodiversity and geodiversity development management policy would help moderate effects to a degree, though it may be difficult to fully compensate for a loss of blanket bog and deep peat, so potentially major residual effects may remain. However, the satisfactory completion of a project level appropriate assessment would ensure no likely significant effects remain on the Natura 2000 site, so we estimate the effects of the policy to be minor negative to uncertain.</p>
	?	?	?					

								<p>The overall score for both sites is minor negative to uncertain.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale (but may have national ramifications).</p>
2.	0	0	0		✓	✓	✓	<p><u>Local Effects</u> Deepening or extending Burythorpe could affect the aquifer or surface drainage / hydrological links to the nearby Mill Beck. However, the site is not in a Source Protection Zone. However, the 'Water Environment' development management policy is likely to bring impacts down to acceptable levels.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. Key possible impacts included the risk from fuel spills leaching off site. These impacts would also apply to extensions to the site. Effects are likely to be controlled by the 'Water Environment' development management policy.</p> <p>The overall score for both sites is insignificant to minor negative.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
3.	0	0	0		✓	✓		<p><u>Local Effects</u> Traffic impacts from Burythorpe would depend on routes taken, though there are several properties close to roads in the vicinity that could experience increased noise and vibration. Distance from the strategic road network also means that</p>

							<p>impacts such as a minor contribution to local congestion might occur if the site is deepened or extended.</p> <p>Blubberhouses Quarry was considered through the sites assessment process which concluded that the application at the site would generate 80 two way trips per day which is acceptable onto the A59, though minor works may be required to extend existing footway / street lighting to serve the site and a traffic assessment will be needed. There are few significant settlements or junctions close by so effects are considered to be negligible to minor negative on account of the minor works. Further lateral extensions / deepening may cause these impacts to continue into the longer term. Neutral to minor negative in the long term.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
4.	0	0	0				<p><u>Local Effects</u> The Burythorpe site is relatively small, and while occasional buildings might be within range of dust impacts, the site is well screened. Coupled with the Amenity and Cumulative Impacts development management policy impacts are unlikely to be significant.</p> <p>Blubberhouses Quarry was considered through the sites assessment process which concluded no significant effects. It is expected that deepening or extending the site would result in a similar outcome.</p> <p>The overall score for both sites together is insignificant.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
5.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Burythorpe lies in an area of Grade 3 land, which is possibly best and most versatile land. While some soil could be taken</p>

							<p>out of production temporarily it is likely that the Soils and Agricultural Land policy will ensure that this will be either restored or put to some other productive use. Lateral extensions would have a land take however. Negligible to minor negative.</p> <p>Blubberhouses Quarry was considered (though not allocated) through the sites assessment process. For Blubberhouses there would be no impact on best and most versatile land, but lateral extensions would have a land take. Minor negative.</p> <p>The overall score for both sites together is minor negative.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
6.	--	--	--	✓		✓	<p><u>Local Effects</u> Although this policy relates to two specific sites, climate change has global effects so effects are considered below.</p> <p><u>Plan level / regional / wider effects</u> The Burythorpe site is distant from the strategic road network, and silica sand would serve a national market, so carbon is expected to be at least of minor significance.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. This identified significant impacts arising from, primarily the loss of deep peat, but also traffic serving a national market. The loss of deep peat through further extensions would further amplify the effects on the climate change objective.</p> <p>The overall score for both sites together is major negative / uncertain.</p>
7.	-	-	-	✓		✓	<p><u>Local Effects</u> Burythorpe is not affected by surface water or fluvial flooding and any risk would be dealt with by the 'Water Environment' development management policy. The site is adjacent to woodland patches in the England Habitat Network which could</p>

							<p>be separated by an extension.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. This concluded that there were no flooding issues on or off site; however, a large amount of ecological network would be lost, though given the size of the network it would be unlikely that species movement would be blocked, though uncertainty would remain until an HRA report had looked into this. Given this policy requires a satisfactory outcome to an HRA this is considered to be a suitable response to a key climate change vulnerability. Positive.</p> <p>The overall score for both sites together is minor negative to minor positive.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
8.	-	-	-	✓		✓	<p><u>Local Effects</u> Although this policy relates to two specific sites, silica sand is a nationally important mineral so effects are considered below.</p> <p><u>Plan level / regional / wider effects</u> Silica sand is a nationally important mineral. Clearly extracting it will diminish the resource. Alternatives to silica sand in relation to its key applications (e.g. high purity glass and foundry sand) are currently available. However, they are limited in supply².</p> <p>The overall score for both sites together is minor negative.</p>
9.	?	?	?		✓	✓	<p><u>Local Effects</u></p>

² See BGS, 2009. Minerals Planning Factsheet: Silica Sand.

								<p>Although this policy relates to two specific sites, effects are considered below as they are considered to be plan level effects.</p> <p><u>Plan level / regional / wider effects</u> It is not known whether extracting silica sand dis-incentivises the uptake of recycled alternatives so the effects on this objective are unknown.</p> <p>The overall score for both sites together is uncertain.</p>
10.	-	-	-	✓		✓		<p><u>Local Effects</u> Burythorpe is quite close to a scheduled monument, so impacts on setting may be a possibility, while there may be direct impacts on archaeology from extending the site. Effects would be moderated by the Historic Environment development management policy.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. While no effect on historic character was noted there could be major effects on archaeology. Lateral extensions could extend impacts, though effects would be moderated by the historic environment development management policy.</p> <p>The overall score for both sites together is minor negative / uncertain.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
	?	?	?					
11.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although screened to the west, north and south by trees the Burythorpe site may be visible from receptors to the east if extended – e.g. the designated landscape of Burythorpe House. However, effects will be reduced to ‘not unacceptable’ by the ‘Landscape’ development management policy. Minor negative / uncertain.</p> <p>Blubberhouses Quarry was considered through the sites assessment process. The site is within an AONB and impacts could combine with the A59. Deepening and extension could amplify impacts further, though effects would be moderated by the Landscape development management policy. Major negative / uncertain.</p> <p>The overall score for both sites together is minor negative / uncertain.</p>
	?	?	?					

								<p><u>Plan level / regional / wider effects</u></p> <p>This policy relates to 2 specific sites so effects are considered to be local scale.</p>
12.	+	+	+		✓	✓		<p><u>Local Effects</u></p> <p>Effects are considered wider than local.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Silica sand is of national importance for glass making and for use in foundries. Jobs will also be secured.</p> <p>The overall score for both sites together is major positive.</p>
13.	+	+	+		✓	✓	✓	<p><u>Local Effects</u></p> <p>These sites would support some jobs, and some employees may live near to Burythorpe. There may be some very minor traffic impacts on access to nearby settlements depending on traffic routing.</p> <p>The overall score for both sites together is minor positive.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This policy relates to 2 specific sites so effects are considered to be local scale.</p>
14.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>A bridleway runs to the north of Burythorpe, while a footpath lies around 250m south, so these may be affected by extensions in particular, and may need diverting.</p> <p>Blubberhouses quarry was considered through the sites assessment process. The site might impair the experience of users of open access land and rights of way. Extensions may amplify effects. However, these effects would be moderated by the Amenity and Cumulative Effects development management policy. Minor negative to uncertain.</p>

	?	?	?				<p>The overall score for both sites together is minor negative to uncertain.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
15.	-	-	-		✓	✓	<p><u>Local Effects</u> The Burythorpe site is relatively small, and while occasional buildings might be within range of dust and noise impacts, the site is well screened. Coupled with the Amenity and Cumulative Impacts development management policy, impacts are unlikely to be significant.</p> <p>Blubberhouses quarry was considered through the sites assessment process. This considered that effects to local receptors of noise and dust would be of minor significance. Extending or deepening this site could amplify effects, though these effects would be moderated by the Amenity and Cumulative Impacts development management policy. Minor negative.</p> <p>The overall score for both sites together is minor negative.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
16.	0	0	0				<p><u>Local Effects</u> Burythorpe is not affected by surface water or fluvial flooding and any risk would be dealt with by the 'Water Environment' development management policy.</p> <p>Blubberhouses quarry was considered through the sites assessment process. No flooding issues were noted.</p> <p>The overall score for both sites together is insignificant.</p> <p><u>Plan level / regional / wider effects</u> This policy relates to 2 specific sites so effects are considered to be local scale.</p>
17.	0	0	0				<p><u>Local Effects</u></p>

										No clear link
										<u>Plan level / regional / wider effects</u>
										No clear link

Summary of assessment Supporting these two sites and the deepening of or extension of them could lead to a range of negative effects. These are outlined in the site sustainability appendix in detail. Major positive effects are also identified for the economy objective, as silica sand is a nationally significant mineral resource.

While the development management policies should help moderate many of the effects noted, particular issues that would need satisfactory resolution include the Blubberhouses site’s potential impact on peat soils as well as views from the Area of Outstanding Natural Beauty and any issues that might be identified through appropriate assessment of the effects of the Blubberhouses site on the blanket bog habitats and species associated with the North Pennine Moors SAC/SPA.

Recommendations: No specific recommendations are made.

Policy M13: Continuity of supply of clay

- 1) The provision of sufficient permitted reserves of clay to provide a 25 year supply for existing manufacturing operations at Alne Brickworks and Plasmor Blockworks, Great Heck, is supported as follows:
 - i) Allocation required in order to meet requirements during the Plan period:
Land to north of Hemingbrough clay pit (MJP45)
 - ii) Allocation potentially required to contribute to maintaining longer term supply for Plasmor Blockworks:
A Preferred Area on land adjacent to former Escrick Brickworks (MJP55)

Development of reserves within this Preferred Area will only be permitted where it would follow the extraction of reserves within allocation MJP45 or it can be demonstrated that additional reserves are required to maintain an adequate longer term supply of clay to the Plasmor Blockworks site and subject to compliance with the development management policies in the Plan.
- 2) Maintaining the supply of clay is also supported through identifying an allocated site for engineering clay at:
Land north of Duttons Farm, Upper Poppleton (MJP52)
- 3) Proposals for the development of sites allocated in 1) and 2) above will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.
- 4) Working of unallocated brick clay resources will be permitted where it can be demonstrated that the mineral is needed to maintain an adequate supply to existing manufacturing facilities in line with national policy, where sufficient mineral cannot be provided from sites or preferred areas allocated in the Joint Plan and subject to compliance with relevant development management policies in the Joint Plan.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

Note on scoring: Assessment has been undertaken by predicting the likely sustainability effects on the baseline. The assessment is made on the basis of the information provided in the text of the policy, any supporting text and any other policies that might support the implementation of the policy. Recommendations for mitigation may be recommended that may lessen effects, however, the scoring is 'before mitigation' is applied. Where the plan already includes mitigation for a policy, such as through drawing a link to the development management policies, the assessment assumes that those policies will be implemented and thus the mitigation is factored in to the scoring³.

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							<p>Extracting clay from the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed in line with the site assessment methodology and the results are presented in Appendix II of the Sustainability Appraisal Report.</p> <p>However the policy also refers to unallocated brick clay resources that will be allocated in line with relevant development management policies. The assessment below considers the effects of unallocated sites only.</p> <p>It should be noted that a key uncertainty was observed during this assessment. This relates to the effect that might occur if allowing unallocated sites in the Plan area effectively offsets the need to develop clay sites elsewhere. Such sites may have better or worse environmental effects. We have not scored for this in the table below, but record it as a general area of uncertainty that affects most of the environmental objectives in particular.</p>
1.	0	0	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Unallocated clay sites are likely to lead to a range of effects on biodiversity depending on location. These will largely be</p>

³ Readers should note that this an evolution of earlier interim assessment phases where additional uncertainty was recorded due to a lack of uncertainty over the final format of other policies in the plan.

								mitigated by policy D07 Biodiversity and Geo-diversity (compliance with development management policies is referred to in the policy). This is expected to 'protect' biodiversity and achieve net gains, though inevitably some disturbance will occur in terms of land and possibly habitat take. This is likely to lead to a neutral to positive effect compared to the baseline (no plan) in the short and medium term, but in the longer term, the Reclamation and After Use policy (D10) is likely to apply, leading to some further potential for positive effects.
2.	0	0	0	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated clay sites are likely to lead to a range of effects on water depending on location. These will largely be mitigated by policy D09 Water Environment, though as that policy seeks demonstration of no 'unacceptable adverse impacts' it is possible temporary residual effects may remain as much depends on what is and what isn't deemed acceptable at individual locations (for instance, temporary residual effects may include minor changes to the surface water drainage, run off etc.).
	-	-	-					
3.	-	-	-	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated sites would, through policy D03, need to consider access arrangements and may require a transport assessment and green travel plan. However, allowing unallocated sites may allow sites which are located in less than ideal positions in terms of transport impacts, though because they will support existing manufacturing facilities, this effect is not likely to be major (particularly as the baseline (no plan) situation would, comparatively allow more unallocated sites), Effects may be heightened along the A19 corridor, as site allocations that feed traffic into the A19 may combine with unallocated sites. However, the mitigation already provided by policy D:03 is likely to be sufficient to avoid higher effects.
4.	0	0	0		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					

							<p><u>Plan level / regional / wider effects</u> Unallocated clay sites may have short term dust impacts during construction, though generally dust is less of an issue at these sites and would be largely mitigated by policy D02 'Local Amenity and Cumulative Impacts'. Some minor effects from transport (e.g. dust, air pollution) may also result (in contrast to a potentially more negative baseline scenario). However, these effects would be at a low level and dependant on location.</p>
5.	-	-	-		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Clay is often extracted from lowland areas which may coincide with best and most versatile land. Although the policy D12: 'Protection of Agricultural Land and Soils' would at least promote the conservation of soils, there would still be a temporary loss of soils from food production. The magnitude of impacts from unallocated sites is dependent on location and the size of sites, but without mitigation is expected to at least be a deterioration from the present situation, though probably better than a 'no plan' baseline.</p> <p>Paragraph 112 of the NPPF already suggests that local planning authorities should seek to use areas of poorer quality land in preference to that of a higher quality. This SA would suggest that this mitigates for effects to some extent but emphasises that planning applications, particularly those which require an EIA (which must consider alternatives), should consider the suitability of possible alternative locations to see if soils could be better conserved at those alternative locations.</p>
	?	?	?				
6.	-	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Transport effects and possible loss of soils is likely to lead to negative effects on climate change. Mitigation already provided through the plan, such as the development management policies, is likely to make effects minor, though it is possible that effects could rise higher at individual sites proportionate to the size of those sites. The baseline situation would be more akin to the plan without mitigation, which would be worse.</p>
7.	0	0	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	?				

								<u>Plan level / regional / wider effects</u> In the short term, as with almost all mineral extraction, some unallocated (and allocated) sites might disrupt ecological networks. However, this is likely to be a relatively low order and temporary impact (because clay quarries are inevitably a barrier to species movement) at a plan scale (though could still be of higher significance locally) given the mitigation provided by Policy D07, which seeks to avoid unacceptable impacts on habitat networks. In the long term clay sites may provide a potential flood storage opportunity, particularly given policy D: 09. The baseline situation would be more akin to the plan without mitigation, which would be worse.
8.	-	-	-	✓		✓		<u>Local Effects</u> Not applicable. <u>Plan level / regional / wider effects</u> Unallocated sites will extract a non-renewable material, though only to maintain an adequate supply in relation to existing facilities. The baseline situation would be worse as unallocated development could occur across a broader range of locations.
9.	0	0	0					No direct relationship with this objective.
10.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Sites proposed for clay extraction already include those with a high potential for the survival of archaeological remains from the later prehistoric period onwards, or may make a negative contribution to the significance of designated historic assets. So it is assumed that unallocated development could have a similar potential to work against this objective. However, mitigation is included in the plan through policy D08, which will conserve archaeological assets in line with their importance. While a baseline of no plan would equate to the effect of no mitigation being applied, with the policy mitigation supplied by D08 effects are more likely to be of a residual, minor negative, nature.
11.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated sites will inevitably lead to landscape change of varying significance depending on location. To some extent these will be mitigated by policy D06, though it is likely some residual effects may be unavoidable. The baseline situation would be more akin to the plan without mitigation, which would be worse (strongly negative).
12.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated sites will help support extant manufacturing facilities directly, and indirectly will help support the construction industry through the supply of bricks. The combination of allocated and unallocated sites is likely to bring greater certainty to the industry, while allowing for unallocated sites still retains some flexibility. Arguably this is more positive than that baseline situation, and is here considered to be highly positive.
13.	+	+	+	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated sites will help support extant manufacturing facilities and the jobs that depend on them as well as providing jobs in their own right. This is a synergistic positive effect as together manufacturing will be supported by a supply of bricks, and brickworks will have a viable location for manufacturing bricks, with a net result of more secure jobs and income, as well as support for markets. Arguably this is more positive than that baseline situation.
14.	-	-	+	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Rights of way would most likely be diverted as a result of Policy D02 interacting with this policy (minor negative). Other recreational impacts are also likely to be mitigated by the development management policies. Recreation opportunities may come in the longer term through restoration, The baseline situation would be more akin to the plan without mitigation, which would be worse.
15.	0	0	0	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated clay sites may have short term dust impacts during construction, though generally dust is less of an issue at these sites and would be largely mitigated by policy D:02 Local Amenity and Cumulative Impacts. Some minor effects from transport (e.g. dust, air pollution, elevated accident risk) may also result, but at a low level and depending on location. A positive effect is also recorded in relation to the jobs provided through this policy. Recreation opportunities may come in the longer term through restoration.
16.	0	0	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together

			?					with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> In the long term clay sites may provide a potential flood storage opportunity, particularly given policy D: 09. The baseline situation would be more akin to the plan without mitigation, which would be broadly the same, but with less opportunity for flood storage.
17.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Unallocated sites will indirectly help support the population through the supply of bricks and thus opportunities for future development. The combination of allocated and unallocated sites is likely to bring greater certainty to the industry, while allowing for unallocated site still retains some flexibility. Arguably this is more positive than that baseline situation, and is here considered to be highly positive.

Summary of assessment A wide range of impacts will result from extraction of clay at the sites specified in this Policy. These are outlined in the Site Sustainability Appraisal Appendix. As many of the site allocations lie in close proximity to other existing or allocated sites, cumulative impacts will be of particular importance.

In terms of unallocated sites, a range of minor positive and negative effects are recorded for most SA objectives as such sites will need to comply with development management policies, which will either control effects or may leave some minor residual effects when they are applied to clay development (such as residual effects on soils / land, water and landscape) or may result in minor positive effects (e.g. through mitigation providing a net gain and a high level of protection – as is the case for biodiversity, or through gains made through restoration). Strong positive effects are observed in relation the economy, community vitality and population change as ultimately clay extraction supports the brick industry and the wider construction industry and the jobs associated with those industries.

Recommendations Appropriate mitigation should be incorporated at each allocation site in line with recommendations in the Site Sustainability Appraisal findings. Cumulative impacts should be given particular regard through the planning application process.

Planning applications, particularly those which require an EIA (which must consider alternatives), should consider the suitability of possible alternative locations to see if soils could be better conserved at those alternative locations.

Policy M14: Incidental working of clay in association with other minerals

The incidental working of clay in association with production of other minerals will be permitted, where the incidental extraction of clay would help to ensure the most sustainable use of resources and would not significantly increase any adverse environmental or amenity impacts associated with the primary working, or the subsequent reclamation and afteruse of the site.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

Note on scoring: Assessment has been undertaken by predicting the likely sustainability effects on the baseline. The assessment is made on the basis of the information provided in the text of the policy, any supporting text and any other policies that might support the implementation of the policy. Recommendations for mitigation may be recommended that may lessen effects, however, the scoring is 'before mitigation' is applied. Where the plan already includes mitigation for a policy, such as through drawing a link to the development management policies, the assessment assumes that those policies will be implemented and thus the mitigation is factored in to the scoring⁴.

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for biodiversity. Some uncertainty could be noted as the stringency in relation to environmental impacts resulting from the primary working is unknown (i.e. there is uncertainty as to what 'not significantly increase any adverse environmental or amenity impacts' might mean in practice). However, development management policies, most specifically policy D07 working in combination with this policy, will provide sufficient mitigation to ensure biodiversity / geo-diversity is appropriately protected. Although not mentioned in the policy text, D07 is mentioned in the 'key links to other relevant policies and objectives' box in the policy table.</p>

⁴ Readers should note that this an evolution of earlier interim assessment phases where additional uncertainty was recorded due to a lack of uncertainty over the final format of other policies in the plan.

								Therefore the effects from this are considered neutral (as it would not cause the baseline would not deteriorate).
2.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for water. There is some uncertainty as to the consideration of 'significance' in relation to these impacts However, development management policies, most specifically policy D09 working in combination with this policy, should provide sufficient mitigation to ensure water is protected. Although not mentioned in the policy text, D09 is mentioned in the 'key links to other relevant policies and objectives' box in the policy table.</p> <p>Therefore the effects from this are considered neutral (as it would not cause the baseline to deteriorate).</p>
3.	-	-	-	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whilst this policy would only support incidental clay extraction where overall environmental and amenity impacts are not significantly increased, there may be potential implications on transport. This would be in relation to additional trips generated by working the clay. The effects would be commensurate to the scale of clay resources gained. Some uncertainty is noted due to not knowing the volume of clay to be extracted through this policy.</p> <p>Development management policies, most specifically policy D03, working in combination with this policy, will provide sufficient additional mitigation to ensure transport impacts are fully considered. However, given that traffic destinations for clay may be quite different to other minerals we maintain that a residual minor negative effect may occur in this assessment (as the baseline may still deteriorate, though not as much as if there were no plan). While not a specific mitigation measure of this SA, an advisory recommendation would be to consider adding policy D03 to the 'key links to other policies' box in the policy table for policy D03.</p>
4.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for air quality. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D02, working in combination with this policy, should provide sufficient mitigation to ensure air quality is protected. Although not mentioned in the policy text, D02 is mentioned in the 'key links to other relevant policies and objectives' box in the policy table.</p> <p>In addition, there may be some impacts from increased trips from a site in relation to road transportation of the clay, which may affect air quality, though such effects would likely be at a very low level. Therefore the effects from this policy are considered neutral.</p>
5.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This would not take any more land in terms of extraction but may incur land take for processing. Positively, it would maximise the productivity of the land already in use and help to minimise additional land take elsewhere for primary extraction. This is considered to have net positive effects.</p>
6.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for climate change. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies working in combination with this policy should provide sufficient mitigation to ensure climate effects are minimised.</p> <p>Also, there may be some impacts from increased trips from a site in relation to road transportation of the clay, which would incur emissions and add to the causes of climate change, though such effects would likely be at a low level. Therefore the effects from this policy are considered neutral.</p> <p>While not a specific mitigation measure of this SA, an advisory recommendation would be to consider adding policy D03 to the 'key links to other policies' box in the policy table for policy D03.</p>
7.	0	0	0				There is no clear link between this objective and adapting to climate change.
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Not applicable.</p> <p><u>Plan level / regional / wider effects</u> This policy would promote efficient use of resources through supporting the extraction of clay through other mineral workings. This would support the objective by reducing the need for primary extraction as well as using minerals resources wisely.</p>
9.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would minimise waste of minerals by processing the by-products from other mineral extraction into useful resources.</p>
10.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

								with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for heritage assets. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D08, working in combination with this policy, should provide sufficient mitigation to ensure the historic environment is protected. Any additional effects are likely to be in locations which are in close proximity to historic townscapes, such as York. Such effects would be likely to be very low level. Therefore the effects from this are considered neutral.
11.	0	0	0					<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for landscape and landscape designations. Where clay occurs alongside other minerals, clay is often retained onsite and replaced in worked out areas in order to achieve a satisfactory landform. This policy would therefore ensure that the incidental working of clay would not have a significant negative impact upon site reclamation. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D06, working in combination with this policy, should provide sufficient mitigation to ensure the landscape is protected. Therefore the effects from this are considered to be neutral.
12.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy is likely to have significantly positive economic effects given that it could maximise the productivity of working mineral extraction locations. This may enable the sites to feed into different markets and usefully use waste by-products of existing mineral extraction. This would not be suitable for all types of extraction however, and may incur additional costs to implement. On balance, this is likely to have positive effects.
13.	0	0	0					<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall amenity impacts are not significantly increased, including consideration for local communities. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D02, working in combination with this policy, should provide sufficient mitigation to ensure any amenity impacts are mitigated for. Although not mentioned in the policy text, D02 is mentioned in the 'key links to other relevant policies and objectives' box in the policy table.</p> <p>Therefore the effects from this policy are considered neutral.</p>
14.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall amenity is not prejudiced, and this should include consideration of recreation and leisure. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D02, working in combination with this policy, should provide sufficient mitigation to ensure any rights of way and access impacts are mitigated for. Although not mentioned in the policy text, D02 is mentioned in the 'key links to other relevant policies and objectives' box in the policy table.</p> <p>Therefore the effects from this policy are considered neutral.</p>
15.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would only support incidental clay extraction where overall environmental impacts and amenity impacts are not significantly increased, which should include consideration for health and well-being in relation to noise, lighting and transport and air and water quality. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, working in combination with this policy, should provide sufficient mitigation to ensure any health issues are mitigated for.</p> <p>Therefore the effects from this are considered neutral.</p>
16.	0	0	0	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would only support incidental clay extraction where overall environmental impacts are not significantly increased, which should include consideration for flood risk. There is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, development management policies, most specifically policy D09, working in combination with this policy, should provide sufficient mitigation to ensure any flooding impacts are mitigated for.</p> <p>Therefore the effects from this are considered neutral.</p>
17.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be positive effects relating to helping to meet local demand for clay. This would be commensurate to the volume of clay produced.</p>

Summary of assessment The impacts associated with this policy are predominantly neutral. The policy would support incidental clay extraction where overall sustainability and environmental / amenity impacts would not be significantly increased. However, there is some uncertainty as to the consideration of 'significance' in relation to these impacts. However, this is largely resolved by considering this Policy alongside the development management policies in the Joint Plan.

Some positive impacts would result from this Policy as it would increase productivity from mineral extraction, minimising the generation of clay waste, providing a valuable building material and providing positive benefits for the economy.

Recommendations While not a specific mitigation measure of this SA, an advisory recommendation would be to consider adding Policy D03 to the 'key links to other policies' box.

Policy M15: Continuity of supply of building stone

- 1) In order to secure an adequate supply of building stone, proposals will, where consistent with other policies in the Joint Plan, be permitted for:-
 - i) the extension of time for completion of extraction at permitted building stone extraction sites;
 - ii) the lateral extension and/or deepening of workings at permitted building stone extraction sites;
 - iii) the re-opening of former building stone quarries;
 - iv) the opening of new sites for building stone extraction, including the small-scale extraction of building stone at new sites adjacent to existing historic buildings or structures where the use is specifically for their repair;
 - v) the incidental production of building stone in association with the working of crushed rock;
 - vi) the grant of permission on sites allocated in the Joint Plan for working of building stone.

Where development is proposed in the National Park or an AONB under criteria i) to iv) above, and where the development comprises major development due to its scale and nature, proposals will need to meet the requirements for major development set out in Policy D04.

- 2) Proposals for the supply of building stone should be supported by evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built and/or historic environment in the Plan area and/or to meeting important requirements for building stone outside the area. The scale of the proposal should be consistent with the identified needs for the stone.
- 3) For proposals for supply of building stone from locations within the National Park or AONBs, it will need to be demonstrated that the stone is required primarily to meet requirements arising from new build or repair work within the National Park and/or AONBs or is for the repair of important designated or undesignated buildings or structures which rely on the proposed source of stone as the original source of supply, or as providing a directly equivalent product which can no longer be provided from the original source supply.
- 4) Additional reserves to help to maintain the supply of building stone are also provided through a site allocation for:

Land at Brows Quarry (MJP63).

Proposals for development at this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

Note on scoring: Assessment has been undertaken by predicting the likely sustainability effects on the baseline. The assessment is made on the basis of the information provided in the text of the policy, any supporting text and any other policies that might support the implementation of the policy. Recommendations for mitigation may be recommended that may lessen effects, however, the scoring is 'before mitigation' is applied. Where the plan already includes mitigation for a policy, such as through drawing a link to the development management policies, the assessment assumes that those policies will be implemented and thus the mitigation is factored in to the scoring⁵.

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for the MJP63 site allocation.							<u>Extracting building stone from the 'Land at Brows Quarry (MJP63)' site has been assessed in line with the site assessment methodology, the results of which are presented in Appendix II of the Sustainability Appraisal Report.</u>
1.	-	-	- +	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Areas of building stone resources in the Plan area are covered by nature conservation designations, particularly within the North York Moors National Park, and therefore this policy could lead to harm to these sites. In the longer term there may be opportunities for enhancements for biodiversity through site reclamation. It is considered that due to the generally small scale nature of building stone extraction operations, and the requirement for evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment, that impacts are likely to be moderated.</p> <p>On the occasions that biodiversity / geo-diversity might be affected, policy D04 is expected to provide some mitigation; and in the Plan area as a whole, mitigation would also come through development management policy D07. Any negative effects are therefore likely to be residual in nature and small scale (and although a deterioration from the present baseline situation, less negative than a 'no plan' scenario).</p>

⁵ Readers should note that this an evolution of earlier interim assessment phases where additional uncertainty was recorded due to a lack of uncertainty over the final format of other policies in the plan.

2.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Under this option there is potential for effects on Nitrate Vulnerable Zones and Groundwater Source Protection Zones as these coincide with building stone resources in many locations. It is considered that due to the generally small scale nature of building stone extraction operations and the requirement for evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment, that impacts are likely to be moderated.</p> <p>On the occasions that water resources might be affected, policy D04 is expected to provide some mitigation; and in the Plan area as a whole, mitigation would also come through development management policy D09. Any negative effects are therefore likely to be residual in nature and small scale (and although a deterioration from the present baseline situation, less negative than a 'no plan' scenario).</p>
3.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Support for new building stone quarries and the extension of existing quarries is likely to result in more transport movements, which may increase over time as more quarries become operational. This policy would however allow for the small scale extraction of building stone adjacent to existing historic buildings where the use is specifically for their repair, and this proximity between source and market may reduce transport miles in some cases. It is considered that due to the generally small scale nature of building stone extraction operations and the requirement for evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment, that impacts are likely to be significantly moderated.</p> <p>Traffic effects are also likely to be reduced by policy D04 in the national parks and AONBs, as well as policy D03 in the Plan area as a whole. Any negative effects are therefore likely to be residual in nature and relatively small scale (and although a deterioration from the present baseline situation, less negative than a 'no plan' scenario).</p>
4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p>

								<p><u>Plan level / regional / wider effects</u> Under this option there are likely to be more localised effects on air quality across any areas where building stone could be extracted as well as air quality issues associated with transportation of stone. It is considered that due to the generally small scale nature of building stone extraction operations and the requirement for evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment, that impacts are likely to be relatively minor . Air quality effects are also likely to be reduced by policy D03 in the Plan area as a whole. Any negative effects are therefore likely to be residual in nature and relatively small scale (and although a deterioration from the present baseline situation, less negative than a 'no plan' scenario).</p>
5.	-	-	-	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> This option is likely to result in a greater amount of land take for building stone quarries including the loss of soil and the loss of agricultural land. In many places (particularly in the NYCC area) building stone resources are overlain by Grade 3 and Grade 2 agricultural land. However, land take would be small due to the generally small scale nature of building stone quarries.</p> <p>Effects on land and soils are also likely to be reduced by policy D12 in the Plan area as a whole. Any negative effects are therefore likely to be residual in nature and relatively small scale (and although a deterioration from the present baseline situation, less negative than a 'no plan' scenario).</p>
6.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Under this option there are likely to be more transport movements, and therefore greater emissions of greenhouse gases, which may increase over time as more quarries become operational. This is considered to constitute a minor negative impact due to the generally small scale nature of building stone quarries and the mitigation provided by development management policy D04.</p>
7.	0	0	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment</p>

							of MJP63.
							<u>Plan level / regional / wider effects</u> In the longer term this option may provide more opportunities for water storage, due to a greater number of closed quarries, thus reducing the risk of flooding downstream ⁶ . Alternatively (and perhaps more significantly), restoration to biodiversity may help contribute to a broader distribution of habitats and species, which is important to help biodiversity adapt to climate change ⁷ . Overall this is likely to be a minor positive effect.
8.	m-	m-	m-	✓		✓	<u>Local Effects</u> Not applicable.
							<u>Plan level / regional / wider effects</u> This policy would support the extraction of building stone and would not therefore serve to minimise the use of resources or re-use of primary materials. The requirement to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment and for extraction to be consistent with identified needs would moderate this effect to an extent.
							To some extent other policies in the plan provide some further mitigation, for instance policy W05: ‘Construction, Demolition and Excavation Waste’, which helps to support capacity for managing construction waste, which could ultimately support a small amount of sustainable stone, though it will be for other plans to increase the demand for previously used building stone.
9.	m-	m-	m-	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.
							<u>Plan level / regional / wider effects</u> By supporting the extraction of building stone this option would not help to encourage the re-use of previously used

⁶ It should however be noted that in most cases building stone quarries are of limited value for flood storage, particularly in comparison to other forms of quarry such as sand, gravel and clay.

⁷ See for example Hopkins et al, 2008, which calls for policymakers to ‘conserve range and ecological variability of habitats and species: It is impossible to predict which localities will continue to have climatic conditions suitable for a given species or habitat. Diversity of terrestrial, freshwater and marine ecosystems, in terms of physical features and habitats, should be maintained. This will increase the chances that species whose current habitat becomes inhospitable will be able to spread locally into newly favourable habitat’ (Hopkins, J.J. et al / DEFRA, 2008. England Biodiversity Strategy Climate Change Adaptation Principles [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69270/pb13168-ebs-ccap-081203.pdf]). Creating a biodiversity friendly restoration scheme (for instance creating conditions that favour colonisation by wildflowers and invertebrates, which is often highly achievable on a quarry floor) in a building stone quarry could increase the distribution of already fragmented habitats, allowing scope for species to spread to these quarries if conditions elsewhere become less favourable.

							<p>building stone. The policy would however support the incidental supply of building stone from crushed rock quarries, ensuring that less resource is wasted.</p> <p>To some extent other policies in the plan provide some further mitigation, for instance policy W05: 'Construction, Demolition and Excavation Waste', which helps to support capacity for managing construction waste, though it will be for other plans to increase the demand for previously used building stone.</p>
10.	++	++	++	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u></p> <p>For the repair and restoration of some heritage assets, it will be essential that the material used comes from the original source of the building stone or, where they exist, from a compatible quarry source. Therefore, in some cases, the only option will be to re-open a face on a currently disused or dormant quarry. This policy will be likely to contribute positively to the achievement of SA objective 10 insofar as it helps to conserve the historic environment of the area and the character of its heritage assets. A limited amount of stone is likely to be required for the repair of most heritage assets.</p> <p>Although building stone extraction operations are likely to be small scale, some negative impacts may occur as a result of an increase in the amount of active building stone quarries in the Plan area and the impacts that these may have on archaeology / the setting of historic assets. To a degree, such impacts will be moderated by development management policy D08 'Historic Environment', which is included in the policy's list of 'key links to other relevant policies' which will be likely to ensure that residual negative effects are limited to minor negative effects.</p>	
	-	-	-				
	++	++	++				
11.	-	-	-	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u></p> <p>There could be negative effects on the landscape resulting from the opening of new quarries (impacts are considered to be of low magnitude as building stone extraction operations are generally fairly small scale), however there could also be strong positive effects through providing opportunities to enable the correct type of stone to be obtained to ensure that new buildings are appropriate in the landscape or townscape. Within protected landscapes i.e. the National Park and the AONBs, effects on the landscape may be particularly pronounced.</p> <p>Negative effects on landscape will be further controlled by the 'Landscape' development management policy (D06), such that the residual effects after this policy mitigation is applied are likely to be minor negative (i.e. slightly worse than the present situation, but not as bad as a 'no plan' scenario).</p>	
	++	++	++				

12.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Under this option it is likely that more jobs would be created in the building stone extraction sector. The provision of building stone will also enable new buildings/housing to be constructed with associated economic benefits.</p>
13.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> This option may support low numbers of jobs and businesses in communities close to building stone quarries but may equally have a negative effect on tourism in the locality. This policy supports the extraction of building stone adjacent to historic assets where practicable and this may have some impacts on tourism (albeit on a very small scale).</p> <p>Negative effects will be minimised by development management policies, notably D08 'Historic Environment' and DO2 'Local Amenity and Cumulative Impacts', such that those effects would be unlikely to be greater than minor negative.</p>
	-	-	-					
14.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Under this option there may be negative effects through the diversion of recreation assets such as Public Rights of Way in addition to potentially more significant indirect effects on the experience of those using such assets. This may increase over time should more quarries become operational. In the longer term there may be opportunities for enhancements for recreation through site reclamation.</p> <p>Negative effects will be minimised by development management policies, notably DO2 'Local Amenity and Cumulative Impacts', such that those effects would be unlikely to be greater than minor negative.</p>
			+					
15.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered</p>

							<p>together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> Under this option it is likely that the health and wellbeing of more communities would be affected by quarries as there is likely to be more noise, traffic and dust. This may increase over time as more quarries become operational. It is considered that due to the generally small scale nature of building stone extraction operations and the requirement for evidence to demonstrate the contribution that the stone proposed to be worked would make to the quality of the built/historic environment, that impacts are likely to be small in scale. In addition, development management policies, such as DO2 'Local Amenity and Cumulative Impacts', would be applied, leaving only minor negative residual effects.</p>
16.	0	0	0	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> In the longer term this option may provide some very limited opportunities for water storage, due to a greater number of closed quarries, thus reducing the risk of flooding downstream⁸. This effect could be negligible, or possibly minor positive.</p>	
17.	++	++	++	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Additionally see assessment of MJP63.</p> <p><u>Plan level / regional / wider effects</u> This option would enable a sufficient supply of building materials to come forward for new developments and would ensure that a wide range of building stone types can be extracted.</p>	

⁸ It should however be noted that in most cases building stone quarries are of limited value for flood storage, particularly in comparison to other forms of quarry such as sand, gravel and clay.

Summary of assessment It is considered that this Policy would help provide an adequate supply and range of building stone to market and therefore positive impacts have been recorded in relation to the economy, community viability and vitality and meeting the needs of a changing population. The Policy would enable building stone to be extracted in close proximity to historic assets or from former quarries where required in order that the correct type of stone can be sourced, conserving the historic environment of an area and the character of its heritage assets. This would result in minor to strong positive impacts in relation to the historic environment and landscape objectives.

Although building stone extraction tends to be a relatively small scale operation, negative impacts have been identified in relation to a number of the environmental and social objectives as this Policy is likely to result in an increase in active building stone sites with associated biodiversity, water, air quality, recreation, landscape and amenity impacts. These effects are likely to be reduced to just low level effects, however, as mitigation is provided through the development management policies.

Recommendations None

Policy M16: Key Spatial Principles for Hydrocarbon Development

Hydrocarbon development of the types identified below should be located in accordance with the following principles:

a)

- exploration, appraisal and production of conventional hydrocarbons, without hydraulic fracturing;
- exploration for unconventional hydrocarbons, without hydraulic fracturing:

Proposals for these forms of hydrocarbon development will be permitted in locations where they would be in accordance with Policies M17 and M18 and, where relevant, part d) of this Policy.

b)

- Exploration, appraisal and production of conventional hydrocarbons, involving hydraulic fracturing;
- Exploration for unconventional hydrocarbons, involving hydraulic fracturing;
- Appraisal and/or production of unconventional hydrocarbons (other than coal mine methane):
 - i) Surface proposals for these forms of hydrocarbon development will only be permitted where they would be outside the following designated areas: National Park, AONBs, Protected Groundwater Source Areas, the Fountains Abbey/Studley Royal World Heritage Site and accompanying buffer zone, Scheduled Monuments, Registered Historic Battlefields, Grade I and II* Registered Parks and Gardens, Areas which Protect the Historic Character and Setting of York, Special Protection Areas, Special Areas of Conservation, Ramsar sites and Sites of Special Scientific Interest.
 - ii) Sub-surface proposals for these forms of hydrocarbon development, including lateral drilling, underneath the designations referred to in i) above, will only be permitted where it can be demonstrated that significant harm to the designated asset will not occur. Where lateral drilling beneath a National Park or AONBs is proposed for the purposes of appraisal or production, this will be considered to comprise major development and will be subject to the requirements of Policy D04.
 - iii) Surface and sub-surface proposals for these forms of hydrocarbon development will also be required to be in accordance with Policies M17 and M18. Surface proposals will also, where relevant, need to comply with Part d) of this Policy.

c) Coal mine methane:

Proposals for production of coal mine methane resources will be supported where any surface development would be located on industrial or employment land or within the developed surface area of existing or former coal mining sites.

- d) All surface hydrocarbon development:
- i) Where proposals for surface hydrocarbon development fall within a National Park or an AONB or associated 3.5km buffer zone identified on the Policies map, or is otherwise considered to have the potential to cause significant harm to a National Park and/or AONB, applications must be supported by a detailed assessment of the potential impacts on the designated area/s. This includes views of and from the associated landscapes from significant view points and an assessment of the cumulative impact of development in the area. Permission will not be granted for such proposals where they would result in unacceptable harm to the special qualities of the designated area/s or are incompatible with their statutory purposes in accordance with Policy D04.
 - ii) Surface hydrocarbon development will only be permitted where the undeveloped character of defined Heritage Coast will be protected.
- e) Conversion of well pads and wells for further or alternative forms of hydrocarbon development:
- Where proposals are brought forward for the conversion of an exploration well pad or individual well to one to be used for appraisal and/or production purposes, or for the conversion of a well pad or individual well used used for conventional hydrocarbons to one to be used for unconventional hydrocarbons, such proposals shall be subject to the spatial principles set out in this Policy as relevant.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy ensures that surface proposals for the categories of development listed at part b of the policy must be outside of European and nationally designated sites for biodiversity and geological diversity, while sub surface development must not cause significant harm to these assets. Similarly National Parks and AONBs are excluded from most forms of surface development and for sub surface development must not be caused significant harm. This will help protect the biodiversity in these areas and sites, but it may promote an indirect effect where more development takes place in locations outside of these areas. While this would have much lower impacts on this objective it could still affect other biodiversity or Geodiversity receptors such as SINC or priority habitats. However the policy would also be supported by the development management policies such as D07 (Biodiversity and Geodiversity) which only permits development that has no unacceptable impacts on SINC, priority habitats and habitat networks and species. This would leave only residual effects post mitigation, which given the small scale of hydrocarbon development sites compared to many of the other categories of minerals and waste sites in this plan is likely to be of low significance and is therefore rated as insignificant in this assessment.</p> <p>Part C of the policy (coal mine methane) may cause some minor effects on the sort of successional habitats that occur on abandoned coal mines, though development management policy DO7 should ensure that such effects are insignificant.</p>
2.	0	0	0		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p>
	-	-	-				

							<p>There is potential for harm to water quality and supply from hydrocarbon developments such as through accidental spills or contamination of surface and groundwater during different stages of hydrocarbon extraction⁹. The policy ensures that the most significant groundwater source areas are avoided by surface development, while sub surface development must not cause significant harm to these assets. However, outside of these areas there is the potential for development to affect surface or groundwater water bodies. However, policy D09 provides a high level of protection to surface and ground water so this, combined with the environmental permitting regime, should guard against any impacts on the quality of water.</p> <p>This latter issue was investigated by the Strategic Environmental Assessment of the 14th Licensing Round for PEDL Licences, which concluded "<i>The risk of surface water contamination is considered to be low. Construction activities could result in the run-off of contaminants, although it would be expected that appropriate surface water management would be put in place to reduce the likelihood of contamination occurring. There is also the potential risk of groundwater contamination from, for example, the loss of well integrity, or the accidental discharge of drilling and hydraulic fracturing fluids or produced water where there are pollutant pathways from the surface to the groundwater body. However, taking into account the requirements for discharge consents/permits and Environment Agency/SEPA policy in respect of groundwater protection, it is considered reasonable to suggest that such risks would be appropriately managed</i>"¹⁰. Nonetheless, this assessment acknowledges that accidents are possible even in highly regulated environments, so we have assessed this effect as insignificant to minor negative, though it is expected that any risk is largely outside of the scope of the plan to regulate and a question to be addressed through the permitting process.</p> <p>The water footprint from hydrocarbons development is not insignificant though industry practice such as recycling of water usually reduces the impact. Development management measures such as D09 on the water environment will protect water flows from unacceptable impact.</p>
3.	-	-	-		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

⁹

The UK Government has produced a 'Facts about Fracking' document which addresses water resource issues. In particular: "The risk of water contamination is low provided operations follow industry standards and obey the regulations. Extraction takes place well below the aquifers that provide drinking water". It also states that "Fracturing rock for shale gas and oil is likely to use large volumes of clean water, though the amount is not exceptional compared with other industrial or leisure activities. The volume will depend on the site, but operating a shale gas well for a decade would typically use a similar volume to that needed to water a golf course for a month." [Department of Energy and Climate Change, 2013. Developing Onshore Shale Gas and Oil – Facts about 'Fracking'. [URL: gov.uk/government/uploads/system/uploads/attachment_data/file/270980/Developing_Onshore_Shale_Gas_and_Oil_Facts_about_Fracking_140113.pdf]

¹⁰ DECC, 2013. Strategic Environmental Assessment for Further Onshore Oil and Gas Licensing - Environmental Report [URL: gov.uk/government/uploads/system/uploads/attachment_data/file/273997/DECC_SEA_Environmental_Report.pdf]

							<p><u>Plan level / regional / wider effects</u></p> <p>While some hydrocarbon development may utilise pipelines for transport, traffic will be an impact during construction, and decommissioning phases in particular. The policy requires development to be consistent with policy M17 which requires suitable access to A and B roads and a transport assessment, as well as demonstration that there is capacity within the road network which would control traffic impacts to a degree. It also requires other measures to reduce traffic effects, such as the requirement that the routing of traffic would not give rise to unacceptable impacts on local communities. In addition, the spatial approach directs development away from some of the more remote locations, While for some hydrocarbons the situation might actually improve, hydraulic fracturing and some other forms of unconventional hydrocarbons development would be new processes in the Plan area, so impacts would be above the baseline and would, for example, include construction vehicles and possible waste water road tankers.</p> <p>In addition, policy M17 requires that “<i>Where hydraulic fracturing is proposed, proposals should also be located where an adequate water supply can be made available without the need for bulk road transport of water</i>”. This will reduce effects.</p> <p>Broadly the impacts are thought to be up to minor negative (largely for receptors along the routes taken by vehicles that could see a cumulative rise in traffic, but within the capacity of the road, and reduced to acceptable levels (though different people have different perceptions of what might be acceptable) as unacceptable impacts would be refused by the policy. Policy M17 protects against cumulative impacts, however, the quality of traffic assessments and the way in which they scope in cumulative effects from other planned development may be variable. To help to ensure that high quality assessments are received the SA should include an indicator to monitor traffic assessments and their consideration of cumulative issues.</p>
4.	0	0	0				<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>While flaring may occur at some sites under this policy, effects are unlikely to be significant and are regulated by permitting regimes. In addition the policy requires consideration of policy M17, which requires that “<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health. Adequate separation distances should be maintained between hydrocarbons development and residential buildings and other sensitive receptors in order to ensure a high level of protection from adverse impacts from emissions to air</i>”.</p>
5.	-	-	-		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

								<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The lowest quality agricultural land is generally found in the National Park and AONBs so this option would therefore direct some hydrocarbon developments to areas which have higher quality agricultural land, though the land take is likely to be relatively small and temporary.</p> <p>While there are some precedents for conventional hydrocarbons, there is considerable uncertainty over the actual level of development that could be generated by unconventional hydrocarbons. However, policy M18 protects against cumulative impacts and policy M17 requires that, where development of new agricultural land is required for processing infrastructure, it should be directed towards land of lower quality in preference to higher quality.</p>
6.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this preferred policy there could be minor negative effects on travel (see objective 3) and therefore greenhouse gas emissions. In particular transport impacts would be reduced because developments are less likely to be in the most remote parts of the Plan area (due to the avoidance / restriction of hydrocarbon extraction in remote areas such as National Parks) and the fact that gas is likely to be transported by pipeline (as required by policy M17). While for some hydrocarbons the situation might actually improve, hydraulic fracturing and some other forms of unconventional hydrocarbon development is a new process in the Plan area, so impacts would be above the baseline and would, for example, include construction vehicles or possible waste water road tankers. However there may also be effects on climate change through fugitive emissions of greenhouse gases regardless of the policy.</p> <p>Generally domestic sources of shale gas are considered to have a lower carbon footprint than liquefied natural gas of gas or use of coal¹¹, so an argument could be made that assuming the baseline on energy consumption were to remain the same, supporting a domestic supply through this policy would generate a positive effect if it helped replace LNG or coal (positive / uncertain effect).</p> <p>While there are some precedents for conventional hydrocarbons, there is considerable uncertainty over the actual level of development that could be generated by unconventional hydrocarbons¹².</p>

¹¹ See DECC, 2013. Potential Greenhouse Gas Emissions Associated with Shale Gas Extraction and Use [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/237330/Mackay_Stone_shale_study_report_09092013.pdf]

¹² DECC / BGS, 2013

7.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Protecting groundwater source areas will help protect an asset that is vulnerable to climate change, so the policy is positive in this regard. Outside of these areas protection of water and biodiversity through links to those development management policies is also indirectly positive.</p> <p>While there are some precedents for conventional hydrocarbons, there is considerable uncertainty over the actual level of development that could be generated by unconventional hydrocarbons¹³. However, policy M18 protects against cumulative impacts.</p>
8.	--	--	--	✓		✓		<p><u>Local Effects</u> Not applicable.</p> <p><u>Plan level / regional / wider effects</u> Despite the restrictive caveats in this policy it still supports hydrocarbon development in principle and therefore does not support reducing the use of resources.</p>
9.	0	0	0					<p><u>Local Effects</u> Not applicable.</p> <p><u>Plan level / regional / wider effects</u> No clear link but policy M17 provides support for re-use or recycling of waste water to minimise the need for off-site disposal.</p>
10.	0	0	0	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

¹³ DECC / BGS, 2013

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Surface hydrocarbon development would not be permitted in World Heritage Sites, Registered Parks and Gardens / Registered Battlefields and the historic environment in the National Park and AONBs and sub surface proposals should not create significant harm to these receptors. Whilst there may be increased negative effects elsewhere depending on the location of the development, the policy works alongside the development management measures which protect the setting of heritage assets as well as seek to protect archaeology, including mitigation for archaeology of less than national significance. Coupled with the fact that surface development is also quite small in terms of overall landtake, effects are considered to not be significant.</p> <p>While there are some precedents for conventional hydrocarbons, there is considerable uncertainty over the actual level of development that could be generated by unconventional hydrocarbons¹⁴. However, policy M18 protects against cumulative impacts.</p> <p>Coal mine methane development will be located in industrial or employment land or within the developed surface area of existing or former coal mining sites. This is unlikely to have a significant effect on the setting of historic assets, and is mitigated by development management policies in terms of archaeology and the protection of other heritage assets where relevant.</p>
11.	-	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p>

¹⁴ DECC / BGS, 2013

						<p>This policy would protect the highest level of landscape designations in the Plan area, while in conjunction with development management policies, other key landscape constraints will be managed down to acceptable levels or mitigated where necessary. Surface development for hydrocarbons is generally small in terms of overall footprint, though it may be difficult to reduce the visibility of some forms of development associated with hydrocarbons (albeit the policy would only support these where they would take place in less sensitive locations).</p> <p>Assessment of views of and from the designated landscapes (National Parks and AONBs) from significant view points and an assessment of the cumulative impact of development in the area will be required, which reduces the potential for cumulative effects on this objective. The undeveloped character of Heritage Coast would also be protected.</p> <p>Coal mine methane development will be located in industrial or employment land or within the developed surface area of existing or former coal mining sites. This is unlikely to have a significant effect.</p> <p>Effects are rated as up to minor negative in terms of the baseline bearing in mind the broad range of locations in which hydrocarbons development could occur. Some uncertainty is acknowledged as it is unknown the degree to which sites could attract further related development.</p>
12.	m +	m +	m +	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this preferred option hydrocarbon developments could, indirectly, be steered towards areas closer to centres of population (as National Parks and AONBs are comparatively sparsely populated) and therefore could help support these economies for example through support for the local service sector and potentially provide jobs for local populations, although there is some uncertainty over this. Some protection from impacts on tourism would be provided due to the avoidance, through the policy, of most forms of hydrocarbon development in significant tourist area (like National Parks) and further protection is provided via policy M17.</p> <p>A negative effect is also reported as the policy, in combination with M17 and M18 may be seen to be quite restrictive and may prevent some hydrocarbon development from occurring.</p> <p>Support for coal mine methane development through the policy is likely to add to enable an income stream from what would otherwise have been an environmental pollutant.</p>

									While there are some precedents for conventional hydrocarbons, there is considerable uncertainty over the actual level of development that could be generated by unconventional hydrocarbons ¹⁵ and the scale and nature of impacts (positive and negative) on the local economy.
13.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this option hydrocarbon developments would, indirectly, be steered towards areas closer to centres of population (as National Parks and AONBs which are largely avoided are comparatively sparsely populated) and therefore could support these economies e.g. through contributions to the local service sector and potentially provide jobs for local populations, although there is uncertainty over this. Conversely, a possible impact may arise where development affects other forms of economic activity, or the perceptions of an area (which may or may not affect visitor numbers to settlements near to areas of hydrocarbon activity for example). However, section c of policy M17 (local economy) and other policy protections for the environment and local communities helps reduce the extent to which this may occur.</p>	
14.	-	-	-	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As the policy steers most forms of hydrocarbon development away from the National Parks, AONBs, SPAs and SSSIs</p>	

¹⁵ DECC / BGS, 2013

							<p>Scheduled Monuments etc., which are key recreational assets in the Plan area, and seeks to protect the setting and historic character of York, the most significant recreational assets in the Plan area are likely to avoid most effects. However, local recreational resources outside of these designations may experience effects such as impacts on the setting and character of recreational places. However, as in the 'communities' objective above, these are likely to receive a high standard of protection through part c of policy M17 and the development management policies in the Plan.</p> <p>Nonetheless, there may be locations where hydrocarbons development impact on users of recreational assets, including the rights of way network, so up to minor negative effects are reported with uncertainty acknowledged because the overall scale of development is not known.</p>
15.	0	0	0		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although the policy does not directly address health it does present links to policy M17 which specifies that “<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health. Adequate separation distances should be maintained between hydrocarbons development and residential buildings and other sensitive receptors in order to ensure a high level of protection from adverse impacts from noise, light pollution, emissions to air or ground and surface water and induced seismicity, including in line with the requirements of Policy D02</i>”. In addition it requires that a health impact assessment be undertaken where proposals involve hydraulic fracturing.</p> <p>We have noted insignificant to minor negative effects however, as traffic will inevitably be generated by developments which, even despite being subject to traffic assessment and other policy requirements, may bring increased noise and vibration impacts to roadside receptors some way removed from development sites (but within 'acceptable' thresholds). These impacts may be perceived differently by different individuals, though in the main will be insignificant. However such impacts are likely to be relatively short lived.</p>
16.	0	0	0				<p><u>Local Effects</u> No clear link.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>
17.	-	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	+	+	+				

								<p><u>Plan level / regional / wider effects</u></p> <p>This policy may potentially restrict some forms of hydrocarbon development from coming forward, as parts of the National Park and the Howardian Hills AONB are PEDL licensed, as are parts of the Green Belt setting to York. This may be negative for a changing population that requires fuel to support their economic opportunities and to heat their homes. However, the policy still allows appropriate hydrocarbons development in suitable locations so there would also be some degree of positive effect.</p>
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Summary of assessment This Policy exhibits a range of mostly neutral or neutral to minor negative effects. This is because in the main it provides a high level of protection for environmental and social factors when considered in combination with other policies in the Plan. This enables objectives such as biodiversity, water, historic environment air and health to report either insignificant or insignificant to minor residual effects after mitigation required by the plan is taken into account.

Some effects are more significantly negative. For instance, because hydrocarbons are a non-renewable fossil fuel, this form of development can only be negative for the materials resources objective. In addition, traffic effects were minor negative as, while the Policy requires consideration of other policies such as M17 which requires transport assessment, there is some concern that rural areas may receive more traffic, albeit within the capacity of the road and within acceptable levels in terms of their impact, while uncertainty remains that traffic assessment would always be sufficiently broad in scope to accurately capture cumulative traffic impacts. Local rights of way may also be affected by views of development of industrial character even after mitigation is applied.

The Policy also has a number of mixed effects, for example on the economy and population objectives as it supports jobs and the provision of energy, though the locational restrictions in the Policy could limit the potential for this whilst at the same time helping to protect the existing rural or visitor economy. Mixed effects are reported for climate change as on the one hand shale gas may generate significant traffic movements, while on the other hand it may provide a domestic source of gas that could offer an alternative to liquid natural gas (LNG) and coal, resulting in carbon savings, though this is uncertain as it also depends on higher level policy decisions made by energy providers and government.

Uncertainty occurs at a number of points in the assessment as the scale of development, along with any supporting development, is to an extent unknown.

Recommendations: While it is considered that the policy would provide an effective approach to managing manage this type of development, the SA highlighted an uncertainty in relation to the quality of transport assessments. To ensure that high quality assessments are received the SA should include an indicator to monitor transport assessments and their consideration of cumulative issues.

Policy M17: Other spatial and locational criteria applying to hydrocarbon development

- 1) Accessibility and transport
 - i) Hydrocarbon development will be permitted in locations with suitable direct or indirect access to classified A or B roads and where it can be demonstrated through a Transport Assessment that:
 - a) There is capacity within the road network for the level of traffic proposed and the nature, volume and routing of traffic generated by the development would not give rise to unacceptable impact on local communities¹⁶, businesses or other users of the highway or, where necessary, any such impacts can be appropriately mitigated for example by traffic controls, highway improvements and/or traffic routing arrangements; and
 - b) Access arrangements to the site are appropriate to the volume and nature of any road traffic generated and safe and suitable access can be achieved for all users of the site, including the needs of non-motorised users where relevant; and
 - c) There are suitable arrangements in place for on-site manoeuvring, parking and loading/unloading.
 - ii) Where access infrastructure improvements are needed to ensure that the requirements of i) a) and b) above can be complied with, information on the nature, timing and delivery of these should be included within the proposals.
 - iii) Where produced gas needs to be transported to facilities or infrastructure not located at the point of production, including to any remote processing facility or the gas transmission system, this should be via underground pipeline, with the routing of pipelines selected to have the least practicable environmental or amenity impact. Where hydraulic fracturing is proposed, proposals should also be located where an adequate water supply can be made available without the need for bulk road transport of water.
- 2) Cumulative impact
 - i) Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable cumulative impact, as a result of a combination of individual impacts from the same development and/or through combinations of impacts in conjunction with other existing, planned or unrestored hydrocarbons development.
 - ii) Well pad density and/or the number of individual wells within a PEDL area will be limited to ensure that unacceptable cumulative impact does not arise. Assessment of the contribution to adverse cumulative impact arising from a proposal for hydrocarbon development will include (but not necessarily be limited to) consideration of:
 - a) the proximity of a proposed new well pad site to other existing, planned or unrestored well pads, and the extent to which any combined effects would lead to unacceptable impacts on the environment or local communities, including as a result of any associated transport impacts;
 - b) the duration over which hydrocarbon development activity has taken place in the locality and the extent to which any adverse impacts on the environment or local communities would be expected to continue if the development were to be permitted;
 - c) the sensitivity of the receiving environment, taking into account the nature and distribution of any environmental constraints, proximity to local communities, the availability of adequate access links to the highway network and the need to ensure a high standard of protection in line with other relevant policies in the Plan.

¹⁶ For the purposes of interpreting this and other Policies in the plan, the term local communities includes residential institutions such as residential care homes, children's homes, social services homes, hospitals and non-residential institutions such as schools.

- iii) Where results from any earlier exploration and/or appraisal activity are available, proposals for production of unconventional hydrocarbons should include information on how the proposal is intended to fit within an overall scheme of production development within the PEDL area and should ensure as far as practicable that production sites are located in the least environmentally sensitive areas of the resource.
- iv) In order to reduce the potential for adverse cumulative impact, proposals for production of hydrocarbons will be supported in locations where beneficial use can be made of existing or planned supporting infrastructure including, where relevant, pipelines for transport of gas and/or water, facilities for the processing or generation of energy from extracted gas and overhead or underground power lines and grid connections which could serve the development.
- v) Where development of new processing, power or pipeline infrastructure is required, consideration should be given to how the location and design of the development could facilitate its use for multiple well pads in order to reduce adverse cumulative impact. The Minerals Planning Authority will support co-ordination between operators and the development of shared infrastructure where this will help reduce overall adverse impacts from hydrocarbon development.
- vi) New processing or energy generation infrastructure for hydrocarbons should as a first priority, be sited on brownfield, industrial or employment land. Where it can be demonstrated that development of agricultural land is required, and subject first to other locational requirements in Policies M16 and M17, proposals should seek to utilise land of lower quality in preference to higher quality.

3) Local economy

Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental, recreational, cultural, heritage or business assets important to the local economy including, where relevant, important visitor attractions. The timing of short term development activity likely to generate high levels of noise or other disturbance, or which would give rise to high volumes of heavy vehicle movements, should be planned to avoid or, where this is not practicable minimise, impacts during local school holiday periods.

4) Specific local amenity considerations relevant to hydrocarbon development

- i) Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health. Adequate separation distances should be maintained between hydrocarbons development and residential buildings and other sensitive receptors in order to ensure a high level of protection from adverse impacts from noise, light pollution, emissions to air or ground and surface water and induced seismicity, including in line with the requirements of Policy D02. Proposals for surface hydrocarbon development, particularly those involving hydraulic fracturing, within 500m of residential buildings and other sensitive receptors, are unlikely to be consistent with this requirement and will only be permitted in exceptional circumstances..
- ii) Proposals should refer to any relevant data from baseline monitoring and other available information to ensure that a robust assessment of potential impacts is undertaken, and that comprehensive mitigation measures are proposed where necessary.
- iii) Proposals involving hydraulic fracturing should be accompanied by an air quality monitoring plan and Health Impact Assessment.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

This assessment is considered supplemental to the assessment at M16. Therefore we have assumed that this policy does not facilitate hydrocarbons development in the same way as M16 and confined the assessment to only those specific factors mentioned in the policy that may contribute to the SA objectives. Therefore it should not be read as an assessment of change relative to an absolute baseline, rather it is an assessment of whether this policy would improve the situation assuming that M16 is already in place.

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part 2 of this policy ensures that 'Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable cumulative impact'. This is likely to reduce any cumulative impact on biodiversity, which is positive. Part 3 of the policy also states '<i>Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental.....assets important to the local economy</i>'. This is also positive.</p>
2.	m +	m +	m +		✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u> Part 2 of this policy ensures that '<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable cumulative impact</i>'. This is likely to reduce any cumulative impact on water, which is positive. Part 3 of the policy also states '<i>Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental.....assets important to the local economy</i>'. This is also positive.</p> <p>Part 4 states "Adequate separation distances should be maintained between hydrocarbons development and....other sensitive receptors in order to ensure a high level of protection from adverse impacts fromground and surface water, including in line with the requirements of Policy D02". This too is positive.</p> <p>Overall moderate positive.</p>
3.	m +	m +	m +		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy includes part 1, which includes a range of measures to ensure that traffic effects are reduced, such as the requirement that the routing of traffic would not give rise to unacceptable impacts on local communities. It also requires gas to be transported by pipeline and that sites where hydraulic fracturing would take place are located where water can be supplied without the need for bulk road transport. As mentioned in the assessment for M16, there is some uncertainty over the quality of transport assessments.</p>
	?	?	?				
4.	m +	m +	m +		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Air quality impacts might come through the generation of dust, through transport or the generation of fugitive emissions (e.g. from drilling activity). This policy requires that "<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health. Adequate separation distances should be maintained between hydrocarbons development and residential buildings and other sensitive receptors in order to ensure a high level of protection from adverse impacts from.....emissions to air..... including in line with the requirements of Policy D02</i>". In addition, the policy states that proposals for surface hydrocarbon development within 500m of residential buildings are unlikely to be consistent with this requirement and an air quality monitoring plan would also be required. This is positive. Similarly, the requirement to transport gas by pipeline will help prevent air quality effects during production.</p>
5.	m	m	m		✓	✓	<p><u>Local Effects</u></p>

	+	+	+				<p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> DECC's Strategic Environmental Assessment of further onshore oil and gas licensing recognised that pad preparation and provision of associated infrastructure (for conventional and unconventional oil and gas and VCBM [Virgin Coal Bed Methane]) is likely to have negative effects due to direct land take, soil loss and compaction¹⁷. Part 2 of this policy ensures that '<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable cumulative impact</i>' which would help to protect from the cumulative loss of high quality farmland. It also requires that, where new processing infrastructure is required it should, as a first priority, be sited on brownfield, industrial or employment land and where development of agricultural land is required, land of lower quality is used in preference to higher quality. Moderate positive.</p>
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The exploration, appraisal and production of hydrocarbons has some potential for release of fugitive methane and other greenhouse gases, while carbon releases might come from transport, the embodied carbon within construction materials, well testing including flaring or from loss of carbon rich vegetation / soils.</p> <p>This policy will help constrain the carbon footprint of hydrocarbons by requiring the use of pipelines for the transport of gas (though there is some uncertainty here as the embodied carbon of pipelines is not known) and through reducing the amount of road transport required for transport of water by requiring that proposals should be located where an adequate water supply can be made available. Impacts on possible carbon rich land are also reduced by the policy's preference for use of brownfield, industrial and employment land ahead of agricultural land. The policy links to policy D11, which should help reduce the carbon footprint of any pipelines.</p>
	?	?	?				
7.	+	+	+	✓		✓	<p><u>Local Effects</u> Not applicable.</p> <p><u>Plan level / regional / wider effects</u> The policy's preference for brownfield, industrial and employment land ahead of agricultural land would have small benefits in terms of adapting to climate change as agricultural land quality is considered vulnerable to future climate change (so would benefit from less pressure from development). .</p>

¹⁷ DECC, 2013. Strategic Environmental Assessment for Further Onshore Oil and Gas Licensing – Environmental Report [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/273997/DECC_SEA_Environmental_Report.pdf]

8.	0	0	0	✓			✓	<u>Local Effects</u> Not applicable. <u>Plan level / regional / wider effects</u> While hydrocarbons development is clearly negative in relation to this objective (see policy M16) this policy could slightly improve the situation by its links to policy D11, which should help reduce the carbon / materials footprint of feature like pipelines.
	+	+	+					
9.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Wastes are likely to be generated from drilling including construction wastes and drilling flowback (waste water). DECC cite studies showing a wide range of water recycling rates from hydrocarbon development (between 10 and 77% of water used across the life time of development, which would in part encompasses exploration drilling) ¹⁸ . While the policy itself does little to reduce water waste (this is addressed in policy M18), it does make links to development management policies D09 (water environment) and D11 (sustainable design) which is mildly positive.
10.	+	+	+	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Part 3 of the policy states “ <i>Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to..... heritage.....assets important to the local economy including, where relevant, important visitor attractions</i> ”. The approach to minimization of cumulative impact from hydrocarbon development in Part 2 of the policy should also help to reduce the overall potential for impact on heritage assets. These are positive contributions to the objective.
11.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Part 3 of the policy states “ <i>Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental.....assets important to the local economy including, where relevant, important visitor attractions</i> ”. The approach to minimization of cumulative impact from hydrocarbon development in Part 2) of the policy should also help to reduce the overall potential for impact on landscape. These are positive contributions to the objective.

¹⁸ ibid

12.	m +	m +	m +	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part 3 of the policy states “Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental, recreational, cultural, heritage or business assets important to the local economy including, where relevant, important visitor attractions”. This is likely to be positive for this objective. However, it is acknowledged that the policy may be quite restrictive for the hydrocarbons industry, so a negative score is also noted.</p>
	-	-	-					
13.	m +	m +	m +		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part 3 of the policy states “Hydrocarbon development will be permitted in locations where a high standard of protection can be provided to environmental, recreational, cultural, heritage or business assets important to the local economy including, where relevant, important visitor attractions”. This is likely to help support community vitality. In addition, part 1 requires that “There is capacity within the road network for the level of traffic proposed and the nature, volume and routing of traffic generated by the development would not give rise to unacceptable impact on local communities”, which again is positive for this objective. Further protection to communities is provided through Part 4 of the policy, which seeks to ensure that unacceptable impact on local communities does not arise, including on public health. The approach to reduction of cumulative impact from hydrocarbon development in part 2 of the policy would also serve to minimise the potential overall extent of impacts on local communities.</p>
14.	+	+	+	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The protection afforded by part 2 of the policy to reduction of cumulative impacts, and the protection to the local economy through protection of environmental, recreational, cultural and heritage or business assets in part 3 would also help reduce adverse effects in relation to this objective. The requirement for the undergrounding of pipelines and the reduction of impacts from traffic from this policy are also likely to be mildly beneficial to this objective.</p>
15.	+	+	+		✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> The policy is strongly focussed on reducing effects on health and wellbeing. For example, it seeks to reduce impacts from traffic and requires that “<i>Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health. Adequate separation distances should be maintained between hydrocarbons development and residential buildings and other sensitive receptors in order to ensure a high level of protection from adverse impacts from noise, light pollution, emissions to air or ground and surface water and induced seismicity, including in line with the requirements of Policy D02</i>”. In addition it requires that proposals for hydraulic fracturing should be accompanied by a Health Impact Assessment.</p>
16.	+	+	+		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy states “Hydrocarbon development will be permitted in locations where it would not give rise to unacceptable impact on local communities or public health”. This would mean that flood risk would need to be accounted for. The policy also links to policy D09 which requires “<i>Permission for minerals and waste development on sites not allocated in the Joint Plan will, where relevant, be determined in accordance with the Sequential Test and Exception Test for flood risk set out in national policy</i>”.</p>
17.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> No effects noted</p>

Summary of assessment The policy mostly acts as a positive safeguard against the main impacts of hydrocarbon development, with some level of positive effect on most of the SA objectives, particularly the water, transport, air, community and health SA objectives. Some uncertainty is highlighted for the transport objective due to uncertainties over the quality of transport assessments, and there is also uncertainty pertaining to climate change as it is not known to what extent features such as pipelines would indirectly generate carbon through their lifecycle. There are also mixed positive and negative scores for the sustainable economy objective because, while policy protects local economies, for developers the policy may be seen as quite restrictive.

We have scored this assessment in terms of the effect it would have on the plan’s approach to hydrocarbons rather than its effect on the baseline, which is covered by the assessment of M16 in combination with these policies.

Recommendations See the recommendation for monitoring transport assessments made at policy M16.

Policy M18: Other specific criteria applying to hydrocarbon development

1) Waste management and reinjection wells

- i) Proposals for hydrocarbon development will be permitted where it can be demonstrated, through submission of a waste water management plan, that arrangements can be made for the management or disposal of any returned water and Naturally Occurring Radioactive Materials arising from the development. Proposals should, where practicable and where a high standard of environmental protection can be demonstrated, provide for on-site management of these wastes through re-use, recycling or treatment. Where off-site management or disposal of waste is required, proposals should demonstrate that adequate arrangements can be made for this. Where new off-site facilities are proposed in the Plan area for the management or disposal of waste arising from hydrocarbons development, these should be located in accordance with the principles identified in Policies W10 and W11.
- ii) Proposals for development involving re-injection of returned water via an existing borehole, or the drilling and use of a new borehole for this purpose, will only be permitted in locations where a high standard of protection can be provided to ground and surface waters; they would comply with all other relevant requirements of Policy M16 and M17 and where it can be demonstrated that any risk from induced seismicity can be mitigated to an acceptable level.

2) Decommissioning and restoration

Proposals for hydrocarbon development will be permitted where, subject to other regulatory requirements, it can be demonstrated that:

- i) Following completion of the operational phase of development, or where wells are to be suspended pending further hydrocarbon development, any wells will be decommissioned so as to prevent the risk of any contamination of ground and surface waters and emissions to air; and
- ii) All plant, machinery and equipment not required to be retained at the site for operational purposes would be removed and the land restored to its original use or other agreed beneficial use within an agreed timescale.

For unconventional hydrocarbon development, the Mineral Planning Authority may require provision of a financial guarantee, appropriate to the scale, nature and location of the development proposed, in order to ensure that the site is restored and left in a condition suitable for beneficial use following completion of the development.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

This assessment is considered supplemental to the assessment at M16. Therefore we have assumed that this policy does not facilitate hydrocarbons development in the same way as M16 and confined the assessment to only those specific factors mentioned in the policy that may contribute to the SA objectives. Therefore it should not be read as an assessment of change relative to an absolute baseline, rather it is an assessment of whether this policy would improve the situation assuming that M16 is already in place.

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> On site management of wastes is likely to require some additional infrastructure (e.g. containment tanks), though this is unlikely to significantly increase the overall site footprint. In the longer term the decommissioning of sites and return to beneficial use may have a degree of minor benefit to wildlife. The requirement in part 1 i) and ii) for a high standard of environmental protection during waste management activity, including for surface and groundwaters, are also likely to be positive.</p>
	+	+						
2.	+	+	m+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. In the longer term the decommissioning of the well and return to beneficial use would be beneficial as it removes any enduring risk to water</p> <p><u>Plan level / regional / wider effects</u> The requirement in part 1 i) and ii) for a high standard of environmental protection during waste management activity, including for surface and groundwaters, are likely to be positive. The policy would also require submission of a waste water management plan.</p> <p>Part 2 of the policy requires any wells to be decommissioned so as to prevent the risk of any contamination of ground and surface waters.</p>
3.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy generally encourages on site management of waste (such as re-injection of returned water) which is positive. Some traffic will be generated during decommissioning. Off-site facilities are also allowed providing they are consistent with policy W10 (which prioritises siting facilities for NORM at existing wastewater treatment works) which could generate some traffic (minor negative, but uncertain as to the volume of traffic). Traffic impacts associated with management of waste are subject of protection provided through the development management policies including policy D03.</p>
	-	-	-					
	?	?	?					

4.	0	0	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> Part 2 i) of the policy requires that emissions to air are prevented during the decommissioning process. While in the main this policy has a negligible effect on air quality, this is a minor positive effect.
5.	0	0	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> On site management of wastes is likely to require some additional infrastructure (e.g. containment tanks), though this is unlikely to significantly increase the overall site footprint. In the longer term the decommissioning and restoration of sites and return to beneficial use may have a degree of benefit to soils and land, and the requirement in certain circumstances for provision of a financial guarantee to secure restoration provides further protection to land and soils.
6.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					<u>Plan level / regional / wider effects</u> This policy generally encourages on site management of waste (such as re-injection of returned water) which is positive as it reduces traffic. Some traffic will be generated during decommissioning. Off-site facilities are also allowed providing they are consistent with policy W10 (which prioritises siting facilities for NORM at existing wastewater treatment works) which could generate some traffic (minor negative but uncertain as to the volume of traffic). Part 2 i) of the policy helps prevent the potential for emissions to air, which could include greenhouse gases, and this is a further potential positive effect.
	?	?	?					
7.	0	0	0					<u>Local Effects</u> No clear link
	+	+	+					<u>Plan level / regional / wider effects</u> The support in principal provided in part 1 i) for reuse and recycling of water could help reduce the overall need for water and this is a minor positive effect.
8.	0	0	0					<u>Local Effects</u> No clear link

	+	+	+					<u>Plan level / regional / wider effects</u> The support in principal provided in part 1 i) for reuse and recycling of water could help reduce the overall need for water and this is a minor positive effect.
9.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Wastes are likely to be generated from drilling including construction wastes and drilling flowback (waste water). DECC cite studies showing a wide range of water recycling rates from hydrocarbon development (between 10 and 77% of water used across the life time of development, which would in part encompass the production phase) ¹⁹ . The policy further promotes management of waste by stating “Proposals should, where practicable and where a high standard of environmental protection can be demonstrated, provide for on-site management of these wastes through re-use, recycling or treatment”.
10.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
11.	0	0	m+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy’s requirements for decommissioning and removal of plant and machinery and return to beneficial use, and the provision in some circumstances of a financial guarantee for restoration for unconventional hydrocarbon development, is likely to be positive.
12.	-	-	-		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together

¹⁹ DECC, 2013. Strategic Environmental Assessment for Further Onshore Oil and Gas Licensing – Environmental Report [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/273997/DECC_SEA_Environmental_Report.pdf]

	+	+	+					with plan level effects below as they could happen across a broad distribution.
	?	?	?					<u>Plan level / regional / wider effects</u> This policy potentially places extra financial burdens on hydrocarbon developers due to the requirement for a financial guarantee to secure restoration. On the other hand recycling liquid / other wastes may ultimately save disposal costs. Effects are quite uncertain however.
13.	0	0	0		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Although the policy may allow the offsite disposal of waste, this would be subject to other policy controls in the Plan including though policy D03 and may not create significant effects on communities (though there is some uncertainty here).
	?	?	?					
14.	0	0	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> In the longer term there may be some minor benefits (e.g. in terms of reduced visual or landscape impact as a result of the policy requirement to require restoration to an original or agreed alternative use within an agreed timescale).
15.	+	+	+		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy states “Proposals for hydrocarbon development will be permitted where it can be demonstrated that arrangements can be made for the management or disposal of any returned water and Naturally Occurring Radioactive Materials arising from the development. Proposals should, where practicable and where a high standard of environmental protection can be demonstrated, provide for on-site management of these wastes”. This, coupled with the regulatory regime, is likely to prevent any health risks occurring. In addition, the policy requires sites to be decommissioned ‘so as to prevent the risk of any contamination of ground and surface waters and emissions to air’. This is broadly positive for health and wellbeing.

16.	0	0	0						<u>Local Effects</u> No clear link
									<u>Plan level / regional / wider effects</u> No clear link
17.	0	0	0						<u>Local Effects</u> No clear link
									<u>Plan level / regional / wider effects</u> No clear link

Summary of assessment Generally this Policy has positive effects on most of the objectives. This is because it generally encourages on site management of waste (such as reuse/recycling of returned water) ensuring a high standard of environmental protection in doing so (with positive effects for many of the environment objectives as well as the health objective). It also requires hydrocarbon sites to be returned to their original use or other agreed beneficial use (essentially a return to the baseline, though we have scored this assessment in terms of the effect it would have on the Plan's approach to hydrocarbons rather than its effect on the baseline, which is covered by the assessment of Policy M16 in combination with these policies). This is positive as it benefits objectives like the landscape and land objectives in the long term.

Slight negative effects are noted as off-site facilities for waste management are also within the scope of the Policy, providing they are consistent with Policy W10 (which prioritises siting facilities for NORM (Naturally Occurring Radioactive Material) at existing wastewater treatment works). This could generate some additional traffic (minor negative, but uncertain as to the volume of traffic) though Policy W11, which is also referred to in the Policy, prioritises waste management close to source. The sustainable economy objective records mixed effects as the Policy potentially places specific financial requirements on hydrocarbon developers due to the need, where justified by specific circumstances, for a financial guarantee to secure restoration. On the other hand recycling liquid / other wastes may ultimately save disposal costs.

Recommendations: Due to uncertainty over the volume of traffic generated by off-site disposal it is recommended that the SA monitors the significance of this through submitted planning applications.

Policy M19: Carbon and gas storage

Proposals for carbon capture and storage and the underground storage of gas will be permitted where it has been demonstrated that:

- i) The local geological circumstances are suitable;
- ii) The proposals would not have an unacceptable impact on the quality and availability of ground and surface water resources, on land stability, or on public health and safety;
- iii) There would be no unacceptable impact on the environment or local communities; and
- iv) The proposals are consistent with other relevant policies in the Plan.

Transport of carbon or gas should be via pipeline with the routing of lines selected to give rise to the least environmental or amenity impact.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>If carbon storage occurs there is likely to be some degree of effect on biodiversity from surface infrastructure and the pipeline although the extent of this would depend upon the precise location of any development (though the policy suggests that pipelines would be in areas with the least environmental impact). Underground storage of carbon has the potential for a range of impacts on biodiversity, which range from acute toxicity to fauna and changes in the PH of soils in the event of infrastructure failure causing leaks. Natural gas transport and storage may also have toxic effects where leaks occur²⁰, while both types of development would have construction impacts such as loss or disturbance to habitat. Pipelines are a key impact on biodiversity for both carbon storage and natural gas storage as land is disturbed temporarily during construction²¹.</p>
	?	?	?					

²⁰ Natural gas is not thought to be toxic to plants, but is toxic to fauna

²¹ Environment Agency, undated. Scoping the Environmental Impacts of Carbon Capture, Transport and Storage [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297115/geho0811bucq-e-e.pdf]

3.	+	+	+		✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The option requires transportation via pipeline and would therefore have positive effects in terms of reducing any impacts from transportation (though effectively the baseline would stay the same in the Plan area, underground natural gas storage does occur elsewhere²⁵ and may or may not generate transport impacts so we have tentatively awarded a minor positive here). However, there would be likely to be impacts on transport associated with construction and some minor traffic impacts associated with maintenance and operation which moderates the positive effect slightly.</p> <p>Uncertainty is noted as there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely</p>
	?	?	?					
	0	0	0					
4.	0	0	0		✓	✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Local air quality can be affected during construction due to production and suspension of dust as well as fuel use by machinery and vehicles if (human and biotic) receptors are nearby. For carbon capture, according to the Environment Agency 'Fugitive emissions of CO₂ may be experienced from inadequate seals and fittings along the CCS chain' and 'CO₂ releases would cause local air quality reductions, being worst during calm weather conditions'²⁶. Such effects however would be a product of poor maintenance and not of carbon storage per se, and would be very local in scale. Similar effects may, under conditions of poor maintenance, be observed for gas pipelines, with natural gas leaks having locally toxic effects. However, given the value of natural gas there would be even more of an imperative to quickly repair leaks.</p> <p>Compliance with other policies in the plan and the 'no unacceptable impact on the environment' aspect of this preferred policy is likely to restrict such impacts to low and possibly insignificant levels.</p> <p>Uncertainty is noted as this policy relies on other policies in the plan which is, as yet, unadopted. Equally there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely.</p>
	-	-	-					
	?	?	?					

²⁵ See BGS, 2016. Underground Natural Gas Storage in the UK [URL: <http://www.bgs.ac.uk/research/energy/undergroundGasStorage.html>]

²⁶ Environment Agency, ibid.

5.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	?					<u>Plan level / regional / wider effects</u> As reported under objective 1, land could experience local changes in soils as a result of enduring carbon or gas leaks. This could have positive or negative effects on the productivity of soils (for instance CO ₂ can at lower levels act as a fertiliser ²⁷). For both CO ₂ and gas however, impacts are expected to be local and restricted to the immediate vicinity of the pipeline and injection point.
	0	0	0					Land take is also an issue. Gas storage injection facilities, if they are sited on land, and with the inclusion of ancillary buildings / processing, can have a significant land take ²⁸ . The pipeline, if buried, would only have a temporary impact on soils. CCS injection facilities are, however, currently without precedent in the UK with initial details only currently available for the capture sites, but not for non-marine storage sites. However, it is assumed that such facilities would be significantly smaller owing to their function being purely related to storage and requiring no onward processing.
								Given no indication is given of the location of future CCS or gas storage it is not possible to accurately assess the likely impact. However, this policy seeks to guard against unacceptable impacts on the environment and also considers other policies in the plan (including the Protection of Agricultural Land and Soils policy). This would likely either steer facilities away from or mitigate for the best quality land. Uncertainty is noted as there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely.
6.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+					<u>Plan level / regional / wider effects</u> Supporting carbon capture and storage would have clear benefits on climate change, as it reduces the input of carbon to the atmosphere from the burning of fossil fuels. Natural Gas storage is not expected to have significant impacts on climate change (though its later burning might well have a very significant impact on flows of CO ₂ to the atmosphere),
	0	0	0					
	?	?	?					

²⁷ Noomen, M.F. et al. 2003. Detecting the Influence of Gas Seepage on Vegetation using Hyperspectral Remote Sensing, University of Twente, Netherlands [URL: http://www.itc.nl/library/Papers_2003/peer_ref_conf/noomen.pdf]

²⁸ See Hydrocarbons-Technology.com, undated. Aldbrough Underground Gas Storage Facility, Yorkshire, United Kingdom [URL: <http://www.hydrocarbons-technology.com/projects/aldbrough-underground-gas-storage-facility>]

	-	-	-				<p>though as leaks are a potential issue in the transport of both forms of storage, small scale negative effects might also be observed.</p> <p>Equally there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely, so some uncertainty is noted.</p>
7.	0	0	0				<p><u>Local Effects</u> No observed effect.</p> <p><u>Plan level / regional / wider effects</u> No observed effect.</p>
8.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Storage of gas does not encourage the depletion or conservation of a resource. While it could be argued that carbon storage perpetuates future utilisation of fossil fuels by making the burning of fossil fuels less damaging to the climate, the opposite argument, that without carbon storage hydrocarbons will continue to be burned releasing great quantities of CO₂, is also put forward. As it is not within the scope of this SA to question the underlying premises upon which the idea of storing carbon is based we have noted no effects.</p>
9.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Neither carbon nor gas storage has a material effect on the minimisation or appropriate management of waste.</p>
10.	?	?	?	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p>

							<p>Injection of carbon or underground storage of gas would be below the level at which archaeological impacts could occur though there is the possibility that the injection site or pipeline could disrupt historic assets. These would be entirely dependent on location, though given that pipelines may be buried and range over a significant distance it seems possible that there would be some level of at least minor disruption to historic assets as a result of this option. This would be kept at a low level by the policy's insistence on 'no unacceptable impact on the environment' and also the consideration of other policies in the plan (most notably the 'Historic Environment' policy).</p> <p>Uncertainty is noted as proposals for carbon storage within the Plan area are currently seen as unlikely.</p>
11.	?	?	?		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Gas storage injection sites as well as carbon injection sites are visible industrial facilities in the landscape if they are sited on land, and with the inclusion of ancillary buildings / processing can have a significant land take. The pipeline, if buried, would only have a temporary impact on the landscape. CCS injection facilities are currently without precedent in the UK with initial details only currently available for the capture sites, but not for non-marine storage sites. However, it is assumed that such facilities would be significantly smaller owing to their function being purely related to storage and requiring no onward processing.</p> <p>Given no indication is given of the location of future CCS or gas storage it is not possible to accurately assess the likely landscape impact. Presumably, however gas storage would most likely be in the east of the Plan area, while CCS storage elements could either be similarly located in saline formations or depleted oil/gas fields, or, if used in conjunction with Enhanced Coalbed Methane Recovery²⁹ in coalfield areas. This could mean that in the eastern part of the Plan area in particular, injection sites may be visible from landscape receptors such as the National Park, tourism assets or the AONB or Yorkshire Wolds. However, This would be kept at a low level by the policy's insistence on 'no unacceptable impact on the environment' and also the consideration of other policies in the plan (most notably the 'Landscape' policy).</p> <p>Uncertainty is noted as there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely</p>
	-	-	-				
	0	0	0				
12.	+	+	+		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

²⁹See Carbon Capture and Storage Association, undated. Enhanced Hydrocarbon Recovery [URL: ccsassociation.org/what-is-ccs/storage/enhanced-hydrocarbon-recovery/ - URL is no longer available.] for a discussion of this topic

	0	0	0				with plan level effects below as they could happen across a broad distribution.
	?	?	?				<u>Plan level / regional / wider effects</u> Gas storage can bring major economic benefits to the UK economy by helping to ensure energy security, while at a local level such facilities can bring jobs to an area. Carbon Capture and Storage, although still untested in the UK is thought to have significant economic benefit, to the extent that the Carbon Capture and Storage Association projects that there is the potential to create 100,000 jobs across the UK by 2030 ³⁰ and DECC predict export opportunities for UK firms at between £3- 6.5 billion per year by the late 2020s ³¹ . Given that the storage element of CCS essentially underpins the wider CCS process (though it is accepted that marine sites may offer alternative locations) the option can be assumed to have a large indirect positive impact on this objective as well as a smaller direct positive impact ³² . Equally there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely (so uncertainty is also noted in addition to the neutral effects).
13.	+	+	+	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As stated above there is a large indirect benefit to jobs from this option, and a smaller direct benefit. There is a risk that this option may, through promoting development that may be visible from tourist receptors, have some degree of negative effect, though other policies in the plan (e.g. 'Landscape') should go a long way towards mitigating this. Uncertainty is noted there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely.
	0	0	0				
	?	?	?				

³⁰ Carbon Capture and Storage Association, undated. Economic importance [URL: ccsassociation.org/why-ccs/economic-importance/ - URL is no longer available]. According to this source "The importance of CCS should not be underestimated. CCS is applicable to both the power sector and the industrial sectors, and will therefore play a vital role in the move to a low-carbon economy. In the power sector, fossil-fuel power with CCS is one of the options which has been identified as a major part of the low-carbon energy mix – alongside nuclear and renewables. CCS will be an increasingly important and necessary option for many industrial sectors, such as steel, cement, chemicals and ammonia."

³¹ For a detailed breakdown of the economic benefits of various options for CCS please see Ricardo AEA / DECC, 2008. Future Value of Coal Carbon Abatement Technologies to UK Industry [URL: http://www.ricardo-aea.com/cms/assets/MediaRelease/PR_190609.pdf]

³² Although the indirect economic benefit of this option is very large, the direct benefit is somewhat smaller (though still significant). According to Ricardo AEA 'the costs of measuring, monitoring and verifying emissions from on-going CO₂ storage has been estimated at £10 million in 2030. We have been unable to quantify the value associated with qualification and licensing of sites and so this figure underestimates the total market opportunity for the UK from CO₂ storage'.

14.	?	?	?		✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Although construction of the pipeline and land take of injection sites may have some direct short term impacts, impacts from the continued operation of sites would be in the form of indirect impacts on recreational receptors, e.g. impacts on views from rights of way. Because such impacts may or may not occur, depending on the location of future development, they are considered uncertain. The policy also seeks to avoid 'unacceptable impacts on amenity' which should ensure that if any negative impacts occur on recreation they are reduced.</p> <p>Equally there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely.</p>
	0	0	0					
15.	0	0	0		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>CCS could have health and wellbeing effects. According to the Environment Agency "any significant release of CO₂ along the chain has the potential to accumulate in dips or slumps on the surface in calm weather conditions. This poses a risk for humans in the affected area, potentially causing fatalities, due to asphyxiation". Similar impacts would be expected from gas storage.</p> <p>However, this policy places public health and safety as a paramount consideration so effects would be considered very low to negligible.</p> <p>Equally there could be no impacts as proposals for carbon storage within the Plan area are currently seen as unlikely (additional uncertainty is noted because of this).</p>	
	-	-	-					
	?	?	?					
16.	0	0	0		✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>There may be some potential for runoff from sites, which may feature ancillary buildings, and hard standing. This is likely to be at a low level, though in an area already prone to flooding this could be significant. However, impacts would be entirely location dependent, and avoidable due to the 'Water Environment' policy in the Plan</p> <p>Uncertainty is noted as there could be no impacts as proposals for carbon storage within the Plan area are currently seen</p>	
	?	?	?					

									as unlikely
17.	0	0	0						<u>Local Effects</u> There is unlikely to be a significant impact from this option on this objective. <u>Plan level / regional / wider effects</u> There is unlikely to be a significant impact from this option on this objective.

Summary of assessment. This preferred Policy has strong positive effects for the economy (in terms of the energy security provided by gas storage and the business opportunities associated with CCS technology) as well as for climate change mitigation. Other effects tend to be location specific though could be negative due to factors such as the land footprint (i.e. the amount of land used) of buildings and pipelines and the risk that leaks could occur.

Recommendations No further mitigation proposed.

Policy M20: Continuity of supply of deep coal

- 1) Proposals for surface and underground development for the mining of deep coal will be permitted where all the following criteria are met:
 - i) the location, siting and design of the surface development would ensure a high standard of protection for the environment and local communities in line with the development management policies in the Joint Plan;
 - ii) the proposals would enable coal to be transported in a sustainable manner;
 - iii) where located in the Green Belt, the proposals would comply with national policy on Green Belt;
 - iv) the effects of subsidence upon land stability and important surface structures, infrastructure (including flood defences) and the natural and historic environment, will be monitored and controlled so as to prevent unacceptable impacts;
 - v) that opportunities have been explored, and will be delivered where practicable, to maximise the potential for reuse of any colliery spoil generated by the development and that proposed arrangements for any necessary disposal of mining waste materials arising from the development are acceptable in line with Part 3 below;
- 2) Proposals to remediate and restore the Womersley Spoil Disposal Site will be permitted where they would be consistent with the development management policies in the Joint Plan.
- 3) Proposals for new spoil disposal facilities will be assessed by reference to the following order of preference:
 - i) Infilling of quarry voids where this can deliver an enhanced overall standard of quarry reclamation;
 - ii) Use of derelict or degraded land;
 - iii) Where use of agricultural land is necessary, use of lower quality agricultural land (ALC Grade 3b or below) in preference to higher quality agricultural land (ALC Grade 3a or higher).

Preference will also be given to proposals for new spoil disposal facilities which are located:

 - iv) Outside the Green Belt, unless it can be shown that the proposals can be accommodated within the Green Belt in line with national policy;
 - v) Where spoil can be delivered to the site via sustainable (non-road) means of transport or, where road transport is necessary, transport of spoil can take place without unacceptable impacts on the environment or local communities.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓		✓	<p><u>Local Effects</u> Although initially land will be lost at Womersley under existing or 'in the pipeline permissions', restoration of Womersley will create opportunities for biodiversity in the longer term as phased restoration will incorporate significant species rich grassland / woodland restoration. In the short term it is anticipated that dust deposition during tipping / restoration could affect a local Site of Importance for Nature Conservation, though the effect will be moderated by on site mitigation measures). This is highly uncertain, however, as the current application at Womersley is as yet undetermined.</p> <p><u>Plan level / regional / wider effects</u> Development of a new disposal site for colliery waste could lead to significant land take (albeit potentially derelict or degraded land). In addition, if a new spoil site is steered toward quarry voids or derelict land, this could generate significant impacts on biodiversity such as loss of habitats or effects of acid drainage on local watercourses if measures to control drainage are not correctly implemented, though restoration may offset these problems to a degree in the longer term.</p> <p>However the development management policies for biodiversity and geodiversity and the water environment (coupled with the permitting regime) are expected to control impacts down to minor levels.</p> <p>Part 1 of the policy relates to new proposals for surface and underground development for the mining of deep coal. This could impact on biodiversity through the land take of buildings and also through the effects of subsidence. However, this would be mitigated down by development management policies and the policy's requirement to monitor and control subsidence effects,</p> <p>Broadly effects are considered to be minor negative and highly uncertain. However , the medium term loss of grassland at Womersley will give rise to a temporary moderate negative impact in the medium term</p>
2.	-	-	m -	✓	✓	✓	✓	<p><u>Local Effects</u> At Womersley, given that environmental controls will be in place through environmental permitting and the water environment development management policy effects are expected to be relatively minor (though accidental spills may still occur), though in the short term is this clearly subject to the outcome of the current planning permission at the</p>

							<p>Womersley Site.</p> <p><u>Plan level / regional / wider effects</u></p> <p>In relation to the policy's approach to a new spoil site, given the location of a new site is unknown, it is not known how sensitive local water bodies will be to change and the efficacy of any future controls. However, as with the Womersley site, the same level of environmental controls would apply.</p> <p>In relation to part 1 of the policy (new surface and underground development), it is possible that effects could include runoff from surface infrastructure / hard standing / spoil storage, and changes to water flow through subsidence. In the longer term possible cessation of mine water pumping from deep mine shafts would have an uncertain impact on overlying aquifers without prior mitigation³³.</p> <p>However, the policy would require consistency with the development management policies, including D09 'Water Environment' which requires protection from at least unacceptable impacts to surface and groundwater quality and surface and groundwater supplies and flows. This will work in combination with the environmental permitting regime. Some residual effects may remain, however mostly these will be below significance thresholds. However, the longer term risk of mine water rebound (given it may require decades of management to control) cannot be discounted, so an uncertain impact is recorded, though monitoring and acting upon future mine water discharges is currently the responsibility of the Coal Authority who act in partnership with the Environment Agency³⁴.</p> <p>Overall, minor negative to uncertain, with an up to moderate level of uncertainty in the longer term,</p>
3.	-	-	-		✓	✓	<p><u>Local Effects</u></p> <p>The current application at Womersley suggests a total of 180 HGV movements in the short term as further tipping takes place and on-going restoration occurs. These were not predicted to have a significant impact on the highway network, but may exhibit effects such as noise (minor).</p>

³³ Burke, S and Barber B report that, in relation to the nearby South Yorkshire Coalfield, "mine water is recovering over large parts of the South Yorkshire Coalfield with many receptors potentially at risk from significant mine water pollution. While much work has so far concentrated on preventing and treating mine water discharges to surface water receptors, the risk to major aquifers has not been fully assessed.....mine water could potentially threaten the aquifers from below....." Burke, S and Barber, J. An overview of mine water rebound in the South Yorkshire Coalfield. Environment Agency, Leeds.

³⁴ See Environment Agency, 2008, Abandoned Mines and the Water Environment [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/291482/LIT_8879_df7d5c.pdf]

								<p><u>Plan level / regional / wider effects</u></p> <p>This policy may result in continued HGV journeys if coal is exported off mine site by road or if spoil is moved off site (though there is some uncertainty if current levels of road journeys will be maintained or increase or decrease).. New spoil sites may also generate more HGVs</p> <p>Consideration of Policy DO3 (Transport) may encourage further use of, non-road transport modes, for transportation of materials and would require a green travel plan if significant transport is to be generated. In addition, preference is given by the policy to sites that use no road transport. This will help minimise impacts.</p>
4.	-	-	-		✓	✓		<p><u>Local Effects</u></p> <p>Existing controls at the Womersley site are likely to reduce effects. The current planning panning application for extending the time period at the site reports low dust disturbance at nearby receptors that comes from ash disposal and restoration work. In any case dust impacts from any further future restoration would be controlled to acceptable levels by the 'Amenity and Cumulative Impacts' development management policy.</p> <p><u>Plan level / regional / wider effects</u></p> <p>. Dust around new colliery or spoil sites could present significant issues and fugitive emissions may increase as an issue across a wider area in the longer term, though coal mine methane extraction for energy use could be a source of mitigation for this (as supported by the hydrocarbons policies in the Plan). HGVs could also generate traffic pollution, though preference is given by the policy to sites that use no road transport. This, along with development management measures, will help minimise impacts.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
5.	-	-	-	✓		✓	✓	<p><u>Local Effects</u></p> <p>Given current proposals at Womersley would not extend the overall area of the site local effects are not considered significant.</p>

							<p><u>Plan level / regional / wider effects</u></p> <p>A new colliery spoil site could have significant negative effects on land, though the policy preference for infilling of quarry voids, derelict or degraded land, and where use of agricultural land is necessary, use of lower quality agricultural land, should ensure effects will be minimised. Coupled with consideration of the development management policies this should ensure valuable soils are not lost.</p> <p>The effects of subsidence upon land stability would also be monitored and controlled by this policy, which will help reduce long term effects.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required</p> <p>Overall Minor negative.</p>
6.	-	m	--	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Further mining will inevitably increase the chance of ventilation air methane (VAM) / firedamp or gob gas (methane arising from collapsed workings) reaching the air. While safety controls may require flaring (effectively converting the gas to CO₂ and water vapour), venting may also occur. However, energy generation from coal mine methane can provide significant mitigation (as provided by the hydrocarbon policies).</p> <p>The preference of this policy to deliver spoil by non-road means and for sustainable transport of coal will help mitigate carbon from transport, while more generally development management policies such as DO2 (which covers emissions to air) will help further reduce effects.</p> <p>Overall effects are highly uncertain, but thought to be potentially cumulative over time even after mitigation.</p>	
7.	0	0	0			<p><u>Local Effects</u></p> <p>There are no local predicted effects from this option on the climate adaptation objective.</p>	

							<p><u>Plan level / regional / wider effects</u></p> <p>There are no particular predicted effects from this option on the climate adaptation objective, though some uncertainty is noted over the future flood risk that may affect colliery spoil sites. There is also a high degree of uncertainty over the extent to which new colliery or spoil sites will be required</p>
8.	-- ?	-- ?	-- ?	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This policy promotes the further significant extraction of a non-renewable / non-recyclable fossil resource, which can only negatively contribute to the objective. Effects may be lessened to a degree, for instance, by utilising spoil as aggregate (supported by M11: 'Supply of Alternatives to Secondary Aggregate'), or salvaging coal mine methane.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
9.	m -	m -	m -	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>Waste will inevitably be generated in significant quantities under this preferred policy, though the policy also supports new spoil disposal facilities, which could be reworked for secondary aggregate under policy M11: 'Supply of Alternatives to Secondary Aggregate'.</p> <p>Overall a moderate negative to uncertain effect is recorded as it is assumed that beneficial uses would be found for some spoil, though it is not known how much as there is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
10.	0 ?	0 ?	0 - ?	✓		✓	<p><u>Local Effects</u></p> <p>None noted as the Womersley site is on previously developed land.</p> <p><u>Plan level / regional / wider effects</u></p> <p>A new disposal or mine site could have negative impacts, though the policy generally steers sites to previously used land (for disposal) and away from the Green Belt (which may avoid some impacts on historic setting). However, previously</p>

							<p>used derelict sites may have their own historic interest. Effects will to a large degree be mitigated by the 'Historic Environment' development management policy.</p> <p>In addition, the policy seeks to control effects from mining from subsidence and its effects on environmental and cultural designations. Nonetheless, some (low level) uncertainty is noted in the long term due to the possibility that residual effects could occur.</p> <p>Overall minor negative effects are predicted. There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required</p>
11.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> In the current proposal at Womersley landscape impacts are highlighted from the active tipping area in the short term. This would, however, be balanced to a degree by phased restoration (subject to the outcome of the current application at Womersley), for which further proposals are supported.</p> <p><u>Plan level / regional / wider effects</u> For new spoil and mine sites the impact is unknown, though given the size and form of mine sites and spoil sites (they are often difficult to hide) impacts could be up to major negative, though use of quarry voids as spoil sites could in the longer term benefit landscape. Considered together with the landscape development management policy, and the fact that this policy includes protection for the Green Belt, effects are expected to be reduced to lower levels. Minor to moderate negative. There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required</p>
	m	m	m				
	-	-	-				
	?	?	?				
12.	+	+	+		✓	✓	<p><u>Local Effects</u> <u>On-going restoration at Womersley would help retain limited numbers of jobs.</u></p> <p><u>Plan level / regional / wider effects</u> This policy could help to generate jobs and could increase energy security (though energy from coal is currently facing challenging times so new mining jobs may not occur), with benefits to the wider economy. However, negative effects in relation to the climate change objective to some extent limit the degree that any coal mining development could be regarded as sustainable economic growth. Minor positive and highly uncertain.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required</p>
	?	?	?				

13.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> On-going restoration at Womersley would help retain limited numbers of jobs; however there are low level amenity impacts (such as noise and dust) in the shorter term, which may affect community vitality.</p> <p><u>Plan level / regional / wider effects</u> Some benefits to jobs might occur through a new colliery spoil or mine site (though this is highly uncertain given the lack of local sources of spoil or demand for new coal mines currently). Negative effects on local tourism might occur in visual range of sites. Minor negative to minor positive with significant uncertainty.</p>
	-	-	-				
	?	?	?				
14.	+	+	m	✓	✓	✓	<p><u>Local Effects</u> In the longer term public access is a goal for the restoration of the Womersley site, which is moderately positive.</p> <p><u>Plan level / regional / wider effects</u> New colliery and spoil sites will have mixed effects on access and recreation, with negative effects during active phases, and positive effects during restoration. Negative effects would be controlled by development management policies and enhanced by the reclamation and afteruse policy.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
	-	-	?				
	?	?					
15.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> There may be small scale negative effects on wellbeing from works at Womersley in the short term from the noise and traffic effects which are mitigated down to below the significance level. In the longer term there may be some slight benefits due to access to the site.</p> <p><u>Plan level / regional / wider effects</u> New colliery and spoil sites will generate traffic, noise, visual impacts (controlled by development management policies to acceptable levels, though minor residual effects may still occur) and possible safety risks from fugitive firedamp / methane / shaft collapse etc. (which are expected to be largely controlled by HSE regulation). In the longer term subsidence may present a risk affecting wellbeing, though the policy will monitor and attempt to control this. In the longer term restoration schemes may bring benefits. Minor negative.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
	?	?	+				
			?				
16.	0	0	0	✓		✓	<p><u>Local Effects</u> None noted</p>
	?	?	?				

							<p><u>Plan level / regional / wider effects</u></p> <p>Flooding can be caused by subsidence, which may affect the behaviour of surface water drainage, creating new flow paths. It can also lower the height of defences making fluvial flooding more likely. This preferred policy will monitor infrastructure (including flood defences) and control unacceptable impacts. Coal Mining Subsidence legislation should, however, ensure that advance work has been carried out to avoid future impacts³⁵.</p> <p>There is a high degree of uncertainty over the extent to which new colliery or spoil sites will be required.</p>
17.	+	+	+	✓		✓	<p><u>Local Effects</u></p> <p>None noted.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This preferred policy, through possibly providing jobs, could reduce future social exclusion. Though it is highly uncertain that new development will come forward under the policy.</p>

Summary of assessment This Policy exhibits a mixture of mainly minor negative effects and uncertain effects. Most minor negative effects occur because, while the Policy combines with the development control policies in the Joint Plan, because of the nature of deep coal and colliery spoil development, residual effects may remain. This is the case for the flooding, biodiversity, health and wellbeing, landscape, historic environment, soils, traffic, air and water objectives. More significant minor effects occurred in relation to the resource use (as coal mining is the extraction of a non-renewable resource) and climate change (due to longer term greenhouse gas emissions from mines) objectives.

Positive contributions were also recorded, particularly in terms of the economy. However, all options recorded a high level of uncertainty as coal mining in the UK has an uncertain future.

Recommendations Generally this Policy links well to development management policies which provide appropriate mitigation. However, there is an opportunity to link this Policy to the hydrocarbon Policy M16 to further promote extraction of coal mine methane.

³⁵ See HM Government, 1991. Coal Mining Subsidence Act 1991 [URL: <http://www.legislation.gov.uk/ukpga/1991/45/contents>]

Policy M21: Shallow coal

- 1) Proposals for the extraction of shallow coal will be permitted where extraction would take place as part of an agreed programme of development, in order to avoid sterilisation of the resource as a result of the implementation of other permitted surface development; and where the proposal would be consistent with the development management policies in the Joint Plan.
- 2) Other proposals for the working of shallow coal will be permitted where the following criteria are met:
 - i) Where located in the National Park or an AONB the development would be consistent with Policy D04 or, where the development would be located outside a National Park or AONB, would provide a high standard of protection to the designated area;
 - ii) A high standard of protection would be provided to internationally and nationally important nature conservation designations;
 - iii) Where located in the Green Belt, the working, reclamation and afteruse of the site would be compatible with Green Belt objectives in line with national policy on Green Belt;
 - iv) The site is well located in relation to the highway network and intended markets.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	0	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	+					
			?					

								<p><u>Plan level / regional / wider effects</u></p> <p>While the shallow coal resource generally lies away from the most important areas for biodiversity, the effects of open cast mining, which include loss of habitats from the extraction (and spoil) site and potential problems such as acid drainage and effects on hydrology, can mean that local effects without mitigation have the potential to be wide ranging. Development management policies, the policy's avoidance of nationally important nature conservation designations, and the environmental permitting regime should mitigate for any major impacts, though the level of local disturbance to biodiversity / geo-diversity must still be recorded as being negative.</p> <p>In the longer term there may be some potential for restoration either to the baseline or to an enhanced scenario for biodiversity. Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
2.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The effects of open cast mining on water can be severe without proper mitigation. Development management policies (principally the 'water environment' policy), coupled with the environmental permitting regime, should mitigate for any major impacts, though there may still be some disruption of surface water drainage patterns due to the large scale land loss; and incorrect site management leading to a pollution risk (e.g. from spills) can never be ruled out.</p> <p>The legacy from acid mine drainage can endure into the long term (though regulatory controls should in practice keep this within acceptable levels).</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
	?	?	?					
3.	+	+	+	✓		✓		<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This approach allows greater potential for a more local supply source to feed nearby power stations, thus reducing transport. It also requires sites to be 'near the highway network and intended markets'.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
	?	?	?					

4.	-	-	-		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would support open cast development, which could lead to dust and traffic pollution problems. However, it requires 'other proposals' to be 'near the highway network and intended markets'. In addition, other policies (amenity / cumulative impacts / transport) are likely to mitigate these effects to a degree.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
5.	--	--	?	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option increases the chance that large open cast mining (creating a large void) will occur. If development occurs, this will inevitably mean the loss of soil or land (some of which may be high quality) up until sites are restored, at which point it is possible that there will be a return to baseline conditions (depending on restoration proposals). The Agricultural Land and Soils development management policies should help moderate impacts, and sites ultimately may be restored.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
6.	m	m	m	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u></p> <p>Any open cast coal mine will release a quantum of methane (a powerful greenhouse gas) into the air (though substantially less than deep coal as shallow coal tends to have retained little of its original methane). It will also generate significant traffic and may cause loss of areas of carbon sinks. While this policy excludes coal from the National Park and AONBs (where soils are more likely to be carbon rich), and includes measures to reduce traffic (through signposting to the transport development management policy), which will reduce impacts to a degree, it is likely that impacts will still be of moderate significance.</p> <p>Further mitigation might be achieved through restoration which helps to offset greenhouse gases – for instance restoration of habitats that sequester carbon or restoration to renewable energy production.</p> <p>As with all fossil fuels a key impact occurs when they are utilised. This impact is not considered in this assessment of extraction, though has a very significant effect on climate change.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted</p>
7.	0	0	0				<p><u>Local Effects</u></p> <p>There is no clear link between this preferred policy and the adaptation to climate change SA objective</p> <p><u>Plan level / regional / wider effects</u></p> <p>There is no clear link between this preferred policy and the adaptation to climate change SA objective.</p>
8.	--	--	--	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This option effectively supports the exploitation of a non-renewable (and non-recyclable – if burned) resources.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted</p>
9.	0	-	--	✓		✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>In the longer term, as this option encourages mining, significant waste will be generated.</p>

								Coal mining faces an uncertain future in the UK so uncertainty is noted
10.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There is significant potential for open cast mining to affect the historic environment, both directly (destruction of archaeology) and in terms of setting, or via indirect means such as dust deposition / vibration. Effects can be mitigated by the development management policies to a significant degree (e.g. Historic Environment / Amenity and Cumulative Effects / Reclamation and After use policies) – but cannot be ruled out. In addition, avoidance of development in National Parks and AONBs should help moderate some of the worst potential effects.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
	?	?	?					
11.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There is significant potential for open cast mining to affect landscape / townscape quality. As this objective supports shallow coal (assuming there is a demand for coal) effects could potentially be major negative. Mitigation would come through the preferred development management policies (particularly Landscape) as well as avoidance of National Parks / AONBs (and areas around them where significant impacts could still occur) as well as the enhanced level of protection afforded to Green Belt areas by the policy. But it is likely that residual effects may remain, which could be major if close to or in the more sensitive parts of the Plan area (e.g. district level landscape designations) or close to valued local landscapes, which could see character change substantially as a result of an open cast proposal³⁶. High quality screening and restoration might be the best way of mitigating impacts.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted..</p>
	--	--	--					
	?	?	?					

³⁶ The European Landscape Convention recognises all landscapes as being potentially important to people and recognises 'landscapes as an essential component of people's surroundings, an expression of the diversity of their shared cultural and natural heritage, and a foundation of their identity' (Council of Europe, 2000. European Landscape Convention [URL: <http://conventions.coe.int/Treaty/en/Treaties/Html/176.htm>]

12.	m +	m +	m +		✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As a major employer and source of energy security this option may have significant positive effects, particularly as it allows for the extraction of coal in advance of future development. However, given the non-renewable nature of coal, unless linked with future carbon capture and storage, this form of economic growth cannot be said to be sustainable.</p> <p>Coal mining faces an uncertain future in the UK so uncertainty is noted.</p>
13.	?	?	?					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The effect of this option on communities is uncertain. On the one hand there may be benefits to community cohesion and viability resulting from coal mining, which could potentially be a significant employer, while on the other hand, the environmental and amenity effects of open cast coal mining may damage the perception of a place, leading to effects such as lower house prices or loss of visitor income. While development management policies may help moderate the negative impacts, residual effects may still remain.</p> <p>Coal mining faces an uncertain future in the UK so further uncertainty is noted.</p>
14.	-	-	-		✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> While development management (policy DO2: local amenity and cumulative impacts) will mitigate effects, any access, if present on site, is highly likely to need to be re-routed if open cast mining is supported.</p> <p>Coal mining faces an uncertain future in the UK so further uncertainty is noted.</p>

15.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There is significant potential for open cast coal mining to affect health and safety, both directly (open cast sites themselves are dangerous) and in terms of the heavy traffic, particulate matter and other traffic pollutants it can generate. Effects can be largely mitigated by the development management policies – but residual effects (e.g. from traffic or local dust) may still remain.</p> <p>Coal mining faces an uncertain future in the UK so further uncertainty is noted.</p>
	?	?	?					
16.	0	0	0					<p><u>Local Effects</u> There is no clear link between this option and the reduction of flood risk.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between this option and the reduction of flood risk.</p>
17.	0	0	0					<p><u>Local Effects</u> There is no clear link between this option and the addressing the needs of a changing population sub objective.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between this option and the addressing the needs of a changing population sub objective.</p>

Summary of assessment This Policy mainly reports negative effects against the SA objectives that result from the potential for shallow coal to create large working voids or generate impacts such as traffic, dust and water pollution. While development management policies elsewhere in the Joint Plan will help mitigate these impacts, the possibility that one or more large scale sites could result from the Policy may leave some minor residual impacts.

Minor to major / moderate negative effects being reported under the landscape objective and climate change, land and waste objectives.

Recommendations This Policy is generally mitigated by other policies in the plan (particularly relation to the water environment, local amenity and cumulative impacts, transport, agricultural land and soils, reclamation and after use and historic environment). Further mitigation might be achieved through restoration which helps to offset greenhouse gases – for instance restoration of habitats that sequester carbon or restoration to renewable energy production in the supporting text to this policy this (by pointing out the link between this Policy and part one (iv) of Policy D10 on reclamation and afteruse).

Policy M22: Potash, polyhalite and salt supply

Proposals for the extraction of potash, salt or polyhalite from new sites within the North York Moors National Park and renewed applications for the existing sites at Boulby Mine and Doves Nest Farm beyond their current planning permissions will be assessed against the criteria for major development set out in Policy D04.

Proposals for new surface development and infrastructure associated with the existing permitted potash, polyhalite and salt mine sites in the National Park, or their surface expansion, which are not considered to be major development, will be permitted provided they meet the requirements of Policy D11 and Policy I02 and that no unacceptable impact would be caused to the special qualities of the National Park, its environment or residential or visitor amenity in the context of any need for the development.

Proposals for increased volume of potash extraction, the extraction of other forms of potash not included in existing permissions, or sub-surface lateral extensions to the permitted working area in locations accessible from the existing sites at Boulby Potash Mine and the Doves Nest Farm site as well as proposals for new sites outside of the National Park, will be permitted where it can be demonstrated that the following criteria are met:

- i) The proposals would not detract from the special qualities of the National Park, taking account of any mitigation measures proposed;
- ii) The effects of subsidence upon land stability, coastal erosion and important surface structures, infrastructure (including flood defences) and environmental and cultural designations, can be monitored and controlled so as to prevent unacceptable impacts;
- iii) The proposed arrangements for disposing of mining waste materials arising from the development are acceptable; and
- iv) The requirements of Policy I01 for transport and infrastructure have been fully considered.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> The policy permits sub-surface lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. In relation to lateral extensions, impacts on
	?	?	?					

biodiversity / geodiversity would be limited to indirect effects through subsidence as well as the extension (in terms of the length time they will operate) of existing residual impacts at surface sites and through the delay of decommissioning the site (assuming that additional surface infrastructure would not be required). However, the policy seeks to monitor and control the effects of land instability on environmental designations (including designated biodiversity assets) and any extensions would also be in accordance with the development management policies. This would reduce most effects, though could leave some minor residual effects on biodiversity depending on location.

The policy also states *“Proposals for new surface development and infrastructure associated with the existing permitted potash, polyhalite and salt mine sites in the National Park, or their surface expansion, which are not considered to be major development, will be permitted provided they meet the requirements of Policy D11 and Policy I02 and that no unacceptable impact would be caused to the special qualities of the National Park, its environment or residential or visitor amenity in the context of any need for the development.”*

”. This is likely to minimise any effects on biodiversity.

Plan level / regional / wider effects

The policy also considers new sites and renewed applications as major development in the National Park and AONBs – The starting position of the major development requirements is that major development in designated areas should be refused. This would clearly protect biodiversity / geo-diversity in these areas. However, schemes can be approved in exceptional circumstances where it is demonstrated that they are in the public interest and there has been an assessment of the need for a development, the cost of locating it elsewhere and the extent that environmental effects could be moderated. This potentially allows an opportunity for a major development requirement compliant development to take place, though the hurdles it must overcome are clearly substantial.

This could mean that development (albeit exceptional development) could happen. Given that part of the statutory National Park purposes is to conserve and enhance the natural environment³⁷, and that many biodiversity features of the National Park are of international significance, effects on biodiversity / geo-diversity could potentially occur if any development were to happen, though would, to comply with the policy, need to be moderated to a high standard.

Whilst there are likely to be possible effects on biodiversity / geo-diversity from the development of any further mines outside of the National Park, applying the 5 listed criteria would provide a robust approach to proposals and reduce any effects on biodiversity. Outside of the National Park there are no internationally and very limited nationally designated sites which coincide with the potash resource, but there are a number of locally designated SINCS which may be affected, as well as non-designated biodiversity assets.

One consequence of applying the requirements for major development in designated landscapes is that areas outside of the National Park may be seen as relatively more favourable for potash development (assuming that suitable potash resources are extractable).

This leads to an overall score for this criterion of minor negative AONB uncertainty for the biodiversity / geo-diversity of the Plan Area as a whole (the uncertainty arising from the effect that even a mitigated impact might have on the National Park’s first purpose) .

³⁷ A similar primary purpose of AONBs is to conserve and enhance natural beauty, though the AONB does not coincide with the potash resource area.

2.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. In relation to lateral extensions impacts on water would be limited to indirect effects through subsidence as well as the extension of existing residual impacts at surface sites (including extended need for clean-up and discharge of waste water / groundwater recharge / surface run off from shaft platform etc.) and through the delay of decommissioning the site (assuming that additional surface infrastructure would not be required). However, the policy seeks to monitor and control the effects of land instability on environmental designations (which would include water designations) and development would also be in accordance with the development management policies and these would at least reduce impacts on, or provide substantial mitigation for impacts on the special qualities of the National Park and on water. This would reduce most effects, though could leave some minor residuals effect on water depending on location.</p> <p>The policy also states “Proposals for new surface development and infrastructure associated with the existing permitted potash, polyhalite and salt mine sites in the National Park, or their surface expansion, which are not considered to be major development, will be permitted provided they meet the requirements of Policy D11 and Policy I02 and that no unacceptable impact would be caused to the special qualities of the National Park, its environment or residential or visitor amenity in the context of any need for the development.” This is likely to minimise any effects on water.</p> <p><u>Plan level / regional / wider effects</u> This policy would provide a robust approach to the consideration of proposals in the National Park and AONBs. As the major development requirements could allow development to take place in exceptional circumstances (see objective 1 above) it is possible that an exceptional future potash mine could be seen as acceptable. However, a high level of mitigation is likely to be an integral part of meeting the requirements for major development, which would moderate effects significantly.</p> <p>One consequence of applying the requirements for major development in designated landscapes is that areas outside of the National Park / AONB may be seen as relatively more favourable for potash development (assuming that suitable potash resources are extractable). This could lead to significant potentially cumulative negative effects (e.g. as a result of site construction / operation or if subsequent subsidence were to occur). However, consistency with development management policies should help minimise or mitigate for unacceptable effects. We have considered this effect to potentially be minor negative to uncertain as the area outside the National Park (to the south of the National Park) includes concentrations of groundwater Source Protection Zones in particular (which could be affected by residual issues like accidental spills). To some extent this policy could be strengthened by making a stronger link to development policy D09 in the ‘key links to other relevant policies’ section³⁸.</p>
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³⁸ The assessors noted that Policy D09 ‘Water Environment’ does not provide absolute protection to Source Protection Zones, but allows some development in such areas to be permitted “where the need for, or benefits, of the development clearly outweigh any harm caused”

3.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> The policy supports sub-surface lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. In relation to lateral extensions, assuming that additional surface infrastructure would not be required, impacts on transport would be largely a continuation of existing impacts over a longer period of time (unless it is proposed to work lateral extensions simultaneously to extant works). In the case of Dove Farm transport issues will, in part, be mitigated by transport of potash via a pipeline, and at Boulby via the transfer of a proportion of the potash by rail. However, development would be in accordance with the development management policies. This would reduce most effects. However, the minor adverse transport impacts reported in the Environmental Statement for Dove Farm³⁹ could persist into the longer term if lateral extensions extend the time period the site is worked. We have considered this effect to be most likely to be minor negative to uncertain for lateral extensions.</p> <p><u>Plan level / regional / wider effects</u> This policy would provide a robust approach to the consideration of proposals in the National Park and AONBs in line with national policy, and the means of transporting the mineral in these areas would be taken into account in any decision. However, the major development requirements may make development outside of the National Park more likely than inside the National Park. This could potentially bring transport closer to communities (due to a number of large and small settlements outside of the National Park). However, much is dependent on location, particularly during the operational phase of a site (for instance, a lot would depend on where workers are coming from and where potash is going to). In addition, it is recognised that transport of the potash itself would not necessarily be by road (pipelines or rail may be used). Consistency with policy IO1 and the development management policies should help minimise or mitigate for unacceptable effects for new sites.</p> <p>Overall we consider effect to be up to minor negative with some uncertainty.</p>
	?	?	?					
4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. While the impacts on traffic are discussed in the SA objective above (and a possible consequence of this would be emissions to air) these would be largely mitigated by preferred policy IO2</p>
	?	?	?					

³⁹ See York Potash, 2014. Summary of Environmental Impacts Assessed in the ES, and Mitigation Proposed, that have the Potential to Affect the Special Qualities of the North York Moors National Park [URL:yorkpotash.co.uk/site/assets/files/3403/ypp_sei_appendix_t_-_summary_of_impacts_table.pdf - URL is no longer available]

								<p>and development management policies. In addition, on-going process emissions would take place and dust emissions from site decommissioning may occur at a more distant time, while the dryer stack associated with the Doves Nest Farm site could see its lifespan extended. However, such emissions would be expected to be in line with those currently predicted for the current planning application, which are negligible⁴⁰. The period in which air pollutants are emitted from discharge chimney stacks (associated with the processing of potash) at Boulby will also be extended. Such impacts are presently significantly lower than regulatory limit values, while dust impacts from road traffic impacts at Boulby are also negligible (though dust from train operations was at the time of the Environmental Statement for Boulby rated as having a moderate impact on some local receptors)⁴¹.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This preferred policy would provide a robust approach to the consideration of proposals in the National Park and AONBs. However, the major development requirements may make development outside of the National Park more likely than inside the National Park. This would potentially bring transport closer to communities which could affect air quality.</p> <p>Other air quality impacts arising from any site in the National Park would be moderated by the requirements for major development, though because of the range and distribution of air pollution sensitive habitat receptors in the Park mitigation may need to be to a particularly high level, and may still leave a residual effect. Elsewhere such impacts would be largely dependent on location but locally negative.</p> <p>The conclusion of this assessment is, therefore, that air quality impacts could be minor negative, largely because any more significant effects would be controlled by the development management policies, IO1, IO2 and the major development policy (leaving only residual effects at most). There is some uncertainty noted as the location of development is not known.</p>
5.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the</p>

⁴⁰ See Royal Haskoning DHV, 2015. York Potash Mine, MTS and MHF Environmental Statement – Replacement Non-Technical Statement.

⁴¹ See Cleveland Potash Limited, 1996. Cleveland Potash Limited Environmental Statement [URL: planning.northyorkmoors.org.uk/MVM.DMS/Planning%20Application/808000/808963/12-0303%20Environmental%20Impact%20Statement.pdf - URL no longer available]

							<p>existing sites within or outside of the National Park. As these extensions will be underground, effects are only likely through subsidence or the delayed restoration of extant surface infrastructure. As subsidence will be monitored the effects from this are considered to be up to minor negative in the long term.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy would provide a robust approach to the consideration of proposals in the National Park and AONBs in line with national policy. However the best quality agricultural land generally lies outside the protected landscapes, so if this policy option provides a greater incentive to develop in those other areas (due to the restrictive nature of the requirements for major development in designated landscapes) one could expect a higher chance of negative impacts occurring. These effects could be fairly significant if in Best and Most Versatile land, though would be moderated by development management policies.</p> <p>Overall effects are considered to have the potential to be minor negative given the policy mitigation already provided by the plan.</p>
6.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions and increases in the volume of material extracted at both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. Assuming that these lateral extractions will extend the life of extant sites they may extend the period in which carbon will be generated from plant, machinery and necessary journeys to the sites.</p> <p><u>Plan level / regional / wider effects</u> This policy would provide a robust approach to the consideration of proposals in the National Park and AONBs in line with national policy. However, the major development requirements may make future development outside of the National Park more likely than inside the National Park. This would have an effect on journey length (which in most cases will cause carbon releases through the burning of fuel), though even if a pipeline is utilised, would still be likely to generate some climate change impacts during the construction and decommissioning phases of development.</p> <p>Simply supporting potash extraction / processing would also have a climate change impact as there could, through a site's impact on soils and vegetation, be a loss of stored carbon to the atmosphere. Additionally, a significant amount of buildings and machinery are required by a potash mine, all of which will contain embodied carbon⁴². To some extent development management policies (particularly D11: 'sustainable design, construction and operation of development') will help moderate impacts which may be minor to moderate, with some uncertainty due to the possibility that pipelines or trains may replace other forms of development, and locations may be highly variable in terms of carbon in soils.</p>

⁴² Embodied carbon is that carbon which has been expended in the lifecycle of infrastructure prior to its use – this may come through the extraction, processing and transportation of materials used to make the item, as well as the carbon expended during production and distribution.

7.	0	0	0	✓	✓	✓	<u>Local Effects</u> Not noted <u>Plan level / regional / wider effects</u> This preferred policy would provide a robust approach to the consideration of minerals proposals in the National Park and AONBs in line with national policy. However, as stated under other objectives it may make areas outside of the National Park more realistic development prospects (while still not ruling out development in the National Park completely – i.e. through development that passes the major development requirements or through lateral extensions to extant sites). The preferred policy is very slightly negative as it supports potash extraction from new sites, which would lead to greater hard standing areas associated with surface infrastructure (though these are less likely to be in upland areas). This might have effects such as increased run off or changes to groundwater recharge or could even reduce habitat connectivity. A positive effect is also recorded as provision of potash will help deliver food security in a changing climate.
	-	-	-				
	+	+	+				
8.	--	--	--	✓	✓	<u>Local Effects</u> Not applicable <u>Plan level / regional / wider effects</u> This preferred policy would support increases in extraction of potash which is extraction of a non-renewable resource. The appraisal does however acknowledge that there are limited alternatives to potash as a source of fertilizer ⁴³ , though anaerobic digestate has been shown to contain useful amounts of potash (though field trials are still underway) ⁴⁴ . The extent to which this may represent an adequate alternative is uncertain.	
9.	-	-	-	✓		✓	<u>Local Effects</u> Not noted

⁴³ The appraisal also understands that potash is not considered to be in short supply world-wide and that there is currently spare capacity in the industry. See Wrap, 2012. Using Quality Anaerobic Digestate to Benefit Crops [URL: wrap.org.uk/sites/files/wrap/Quality%20digestate%20-%20using%20quality%20anaerobic%20digestate%20to%20benefit%20crops.pdf - URL is no longer available.]

								<p><u>Plan level / regional / wider effects</u></p> <p>This preferred policy would be likely to result in increased levels of waste (e.g. waste water, possible waste soils, possible construction waste, waste insoluble clays and sodium chloride waste) being produced, the extent of which would be dependent upon the scale of operation and methods of working. While some waste may be re-used (e.g. recycling of water / soil storage for restoration) other wastes may simply be disposed of (often to sea⁴⁵).</p> <p>However, the policy through its mention of policy D11 helps to reduce effects, particularly as this requires 'minimisation of waste generated by new minerals and waste development. We have rated the residual effects after D11 has been applied as potentially minor negative.</p>
10.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm. In relation to lateral extensions (which are deep underground) impacts on the historic environment would be limited to indirect effects through</p>

⁴⁵ Cleveland Potash, undated. Reduction of Waste Discharge By Underground Disposal of Process Residue Life [URL: <http://www.iclfertilizers.com/Fertilizers/ClevelandPotash/Pages/Backfill.aspx>]

								<p>subsidence as well as the extension of existing residual impacts at surface sites (assuming significant new surface infrastructure is not required), including extended impacts on historic character (because of the long history of the Boulby mine this is not seen as a significant impact, though the residual impact upon a number of heritage receptors at Dove Nest Farm is seen as negligible to minor adverse⁴⁶). However, the preferred policy seeks to monitor and control the effects of land instability on environmental designations (including historic environment designations). This would reduce most effects, though could leave some minor residual effects on the historic environment depending on location.</p> <p><u>Plan level / regional / wider effects</u></p> <p>The effects on this objective are uncertain but potentially negative for the National Park as if proposals for mining are approved following consideration against the major development requirements there could be effects on the historic environment depending on its location, though effects would need to be shown to be moderated due to the requirements of policy D04 (minor negative / uncertain effect).</p> <p>There is a greater concentration of Scheduled Monuments in the National Park than in the area of potash resource outside the Park, although there is a greater concentration of Conservation Areas in the area of potash resource outside the Park. As this option could indirectly direct development outside the Park, impacts on Conservation Areas in particular may be possible as traffic is more likely to route through settlements (minor negative / uncertain effect). This could be a cumulative effect with other development. However, consistency with development management policies should help minimise or mitigate for unacceptable effects.</p> <p>A similar argument could be put for the extension of the lifespan of offsite supporting infrastructure outside of the Plan area, as this would continue to be supplied with potash for export / further processing. An extended operational phase for existing sites is not seen as significant however, as both Doves Nest Farm and Boulby send potash to a modern industrial area, the historic character of which would not be significantly affected⁴⁷.</p> <p>Overall effects are rated as minor negative to uncertain.</p>
11.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>The policy supports sub-surface lateral extensions to both Boulby Potash Mine and Doves Nest Farm. In relation to lateral extensions impacts on the landscape would be limited to indirect effects through subsidence (which could for example cause damage at buildings) as well as the time extension of existing residual impacts at surface sites, including extended impacts on landscape character. However, according to the York Potash proposals <i>‘following the establishment of site restoration proposals, the mine would operate without significant adverse effect on local visual and landscape receptors or the wider National Park and would provide a minor landscape benefit’</i>⁴⁸. While the Boulby mine facility is</p>

⁴⁶ Royal Haskoning DHV, 2015. York Potash Mine, MTS and MHF Environmental Statement – Replacement Non-Technical Statement.

⁴⁷ See Royal Haskoning, 2015

⁴⁸ Royal Haskoning 2015

								<p>acknowledged as having a high level of visual impact, the Environmental Statement for the most recent extension of underground workings suggests that, as an established feature, the surface development would not have an impact on landscape character. However, the assumption in this assessment is that, through extending the time period of the mine's presence still further, visual receptors would endure the visual impact for a longer period of time than would otherwise have been envisaged, which is a minor negative continuation effect.</p> <p><u>Plan level / regional / wider effects</u> The effects on this objective are uncertain but potentially negative for the National Park as if proposals for mining are approved following consideration against the major development requirements there are likely to be effects on landscape and townscape depending on its location, though effects would need to be shown to be significantly moderated (minor / uncertain effect).</p> <p>In the wider potash resource area the impacts are likely to be negative at a locally significant scale rather than at a nationally significant scale. The exception to this would be if potash mines were developed in proximity to coastal resorts which rely on their seascape setting, or areas of high landscape sensitivity such as the Yorkshire Wolds (as landscape impacts here could be more severe). However, consistency with development management policies should help minimise or mitigate for unacceptable effects. We have therefore rated the impact outside the National Park as being minor negative to uncertain.</p> <p>An additional argument could be made about the extension of the lifespan of offsite infrastructure outside of the Plan area, which would continue to be supplied with potash for export / further processing. The prolonged on-going impact during an extended operational phase here is not seen as significant however, as both Doves Nest Farm and Boulby sites send potash to a modern industrial area, the townscape character of which would not be significantly affected⁴⁹.</p>
12.	?	?	?		✓	✓	✓	<p><u>Local Effects</u> Lateral extensions may extend the duration of extant jobs at Boulby and Doves Nest Farm.</p> <p><u>Plan level / regional / wider effects</u> If new proposals for mining are approved in the National Park following consideration against the major development requirements for designated landscapes there will be a positive effect on the creation of new jobs at the mine itself and the generation of indirect jobs. However there could be negative effects on tourism resulting from visitor experiences of the Park following the construction and operation of a new mine.</p>

⁴⁹ See also Royal Haskoning 2015

								<p>Elsewhere in the resource area the development of new potash mines would lead to large levels of job creation, with associated knock-on effects, and would therefore have strong positive effects on this objective. However it should be noted that there may be negative effects on the tourism sector in the locality of any new mine.</p> <p>A large degree of uncertainty is noted if the major development requirements in nationally designated landscapes restrict the area from which the resource can be extracted. This is because possible locations in the area outside of the National Park may in practice not be technically or economically viable.</p>
13.	?	?	?		✓	✓	✓	<p><u>Local Effects</u> Lateral extensions may extend the life of the Boulby / Doves Nest Farm sites, with a corresponding impact on communities from issues such as traffic.</p> <p><u>Plan level / regional / wider effects</u> The effects on this objective are highly uncertain as if proposals for mining are approved following consideration against the major development test there may be a positive effect on the vitality and viability of communities from the creation of new jobs at the mine itself and the generation of indirect jobs; however there could be negative effects on tourism.</p> <p>Elsewhere in the resource area the development of new potash mines would lead to large levels of job creation, with associated knock-on effects. However, there may be negative effects on the tourism sector in the locality of any new mine and as noted elsewhere in the assessment, transport effects may also come closer to communities with minor negative effects.</p> <p>Both new sites and lateral extensions to extant sites would need to be consistent with the development management policies which would moderate negative effects.</p>
14.	?	?	?		✓	✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm in locations accessible to the existing sites within or outside of the National Park. In relation to lateral extensions impacts would be limited to subsidence (which would have a negligible effect on recreation) as well as the extension of the timescale of existing residual recreation impacts at surface sites (though at Doves Nest Farm operational impacts to recreational receptors at</p>

							<p>the mine site were rated as negligible to minor beneficial, while the Environmental Statement for Boulby did not note any adverse impact⁵⁰).</p> <p><u>Plan level / regional / wider effects</u> The effects on this objective are uncertain for the National Park as if proposals for mining go ahead following consideration against the major development requirements there could still be negative effects on recreation and visitor experiences depending on their location. There may, however, be positive effects through improvements to recreation facilities to mitigate any adverse effects.</p> <p>Elsewhere in the resource area there may be negative effects as potash facilities would, as an indirect consequence of the major development requirements, be more likely to be located outside the National Park. Such effects could include re-routing of rights of way, erosion of tranquillity etc. and would be most likely to be minor negative.</p> <p>Both new sites and lateral extensions to extant sites would need to be consistent with the development management policies which would moderate negative effects.</p>
15.	?	?	?		✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm. In relation to lateral extensions impacts would be limited to subsidence (which may affect dwellings – affecting the wellbeing of individuals) as well as the extension of the timescale of existing residual health / wellbeing impacts at surface sites (at Doves Nest Farm noise and vibration from offsite road traffic was noted as having a negligible to minor adverse impact during the operational phase⁵¹</p>

⁵⁰ The Environmental Statement did, however, note the visibility of occasional froth from effluent discharged to sea, which might be visible from the Cleveland Way.

⁵¹ York Potash, 2014

							<p>which would be extended under this preferred policy while at Boulby on-going noise has previously been assessed as being non-significant⁵²).</p> <p><u>Plan level / regional / wider effects</u> The effects on this objective are rated uncertain to minor negative for the National Park as if proposals for mining go ahead following consideration against the major development test there could be negative effects on the health and wellbeing of local communities depending on their location, although these would have to be significantly moderated due to the requirements of the NPPF.</p> <p>In the wider resource area, which is more populated, there may be more negative effects as potash facilities would, as a possible indirect consequence of the major development requirements, be more likely to be located outside the National Park (subject to the resource being suitable). These effects could arise from factors such as increased traffic, noise, reduced air quality or significant visual intrusion changing the character of an area. Although potentially major negative, the requirement for consistency with the development management policies and policy IO1 ensures that unacceptable impacts will be avoided (though minor residual effects on wellbeing could remain).</p>
16.	0	0	0		✓	✓	<p><u>Local Effects</u> The policy supports lateral extensions to both Boulby Potash Mine and Doves Nest Farm. In relation to lateral extensions impacts would be limited to subsidence (which can change the pattern of surface water flooding or result in lowered or damaged flood defences) as well as the extension of the timescale of existing impacts at surface sites (at Doves Nest</p>

⁵² See Cleveland potash Limited, 1996

							<p>Farm flood related impacts are predicted to be negligible⁵³ at Boulby, the Environment Agency Flood Map shows the mine site to be unaffected by fluvial flooding with only very minor / negligible surface water flood risk). The development management policies, as well as the criteria set out in this policy relating to subsidence, would help limit impacts.</p> <p><u>Plan level / regional / wider effects</u> The effects on this objective are uncertain in the National Park as if proposals for mining go ahead following consideration against the major development requirements there could be effects on surface water and flooding depending on any mine's location, though a high standard of mitigation would be expected as a result of the major development requirements.</p> <p>In the rest of the resource area this option could have effects in relation to flooding as it could lead to more development and therefore to increased hard surfaced areas thus exacerbating issues of run-off and increasing flood risk. Flooding would be mitigated to a large degree by the development management policies.</p>
17.	+	+	+		✓	✓	<p><u>Local Effects</u> Considered together with plan level effects below</p> <p><u>Plan level / regional / wider effects</u> There could be positive effects on this objective as it supports potash extraction (which is an important resource for a changing population as it supports food production) from new sites and supports lateral extensions to existing sites subject to certain criteria. However, if the major development test is not passed the amount of potash extraction which would be supported would be limited to that which is found outside of the National Park, potentially limiting that which would be made available for use. Minor positive.</p>

Summary of assessment

Most SA objectives have negative effects resulting from application of the major development requirements, which significantly moderate effects, but may still allow some development in the National Parks and AONBs. Support for new development outside of designated landscapes (albeit subject to specific criteria and the development management policies) could lead to negative effects (with significant uncertainty) for most SA objectives. In addition, lateral extensions could lead to minor subsidence or could extend the time period in which Boulby and Dove Farm operate, with corresponding minor negative / uncertain sustainability effects. Effects, however, tend to be minor as they are mitigated by other policies in the Joint Plan.

The economic and community vitality SA objectives report a mixture of uncertain, strongly positive and minor negative effects. This is because significant jobs and other economic benefits could be provided, but tourism may suffer, depending on location. Positive effects are also noted for the changing population SA objective, as potash is an important resource for food production.

The climate change and resource use objectives show stronger negative effects, the former due to the factors such as possible transport of materials, loss of soils

⁵³ ibid

and habitat and the embodied carbon in infrastructure such as road connections, pipelines (if used) and buildings (with uncertainty noted about the configuration of future sites, and effects moderated to a degree by the sustainable design Policy D11), the latter objective recognising a large scale extraction of a non-renewable resource (albeit a resource which has limited potential for substitution).

Minor negative effects are reported for the water quality SA objective, as the potash resource outside of the National Park includes a concentration of Source Protection Zones.

Recommendations This Policy is already significantly mitigated through links to other policies in the Joint Plan. Monitoring of the Joint Plan should determine the extent to which this Policy directs development to areas outside of the designated landscapes and what the effects of this might be.

Policy M23: Supply of gypsum

The extraction of natural gypsum and the supply of desulphogypsum will be permitted where the following criteria are met:

- i) the location, siting and design of surface development would ensure a high standard of protection to the environment and local communities in line with the development management policies in the Joint Plan and the site would not be located in the Green Belt unless it can be shown that the development can be accommodated within the Green Belt in line with national policy;
- ii) the effects of any subsidence upon land stability and important surface structures, infrastructure (including flood defences) and the natural and historic environment, will be monitored and controlled so as to prevent unacceptable impacts;

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The effects from the extraction of gypsum on biodiversity / geodiversity would be location specific and commensurate to the scale of the building works / processing above ground as predominantly this mineral is mined underground. However, such works would need to be consistent with development control policies (including the 'Biodiversity and Geodiversity' policy) and the requirement of this policy to ensure a high standard of protection to the environment. While uncertainty is noted as effects are very much dependent on location, in many instances this is likely to result in effects that are broadly relatively insignificant in terms of the baseline (particularly as there has been no indication of any commercial interest in reactivating workings or the opening of new gypsum mines in the Plan area, and the only extant permission is already developed, but flooded). No effects on biodiversity / geodiversity are predicted from the supply of DSG.</p>
	?	?	?					
2.	0	0	0		✓	✓		<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are</p>

	?	?	?				<p>considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The effects from the extraction of gypsum on water would be location specific, but it would be likely to have more significant effects where it coincides with Source Protection Zones. However, such works would need to be consistent with development control policies including the 'Water Environment' policy and the requirement of this policy to ensure a high standard of protection to the environment. While uncertainty is noted as effects are very much dependent on location, they are also likely to be subject to licensing / environmental permit. Neutral effects (i.e. a continuation of the baseline) on water are also predicted from the supply of DSG due to the synthetic gypsum being generated at established power stations and the unlikely delivery of new power stations over the planning period.</p>
3.	+	+	?	✓	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> Mining is limited to where the mineral is found so it may not be possible to link to sustainable transport. However, consideration of Policy DO3 'Transport of Minerals and Waste and Associated Traffic Impacts' should help maximise opportunities to reduce transport / traffic effects.</p> <p>Processing plants such as plasterboard manufacturers are acknowledged to usually be located close to mines with the baseline showing a plaster works in Sherburn, which has positive implications for low transportation miles if mining were to be resumed at Sherburn in Elmet (though the permission remains extant so that site would not necessarily fall under this policy in the near term). Supporting local extraction could therefore have positive benefits on transport (as currently gypsum must come from outside the Plan area).</p> <p>Currently, transportation of DSG⁵⁴ from Drax power station (the largest producer of synthetic gypsum) is undertaken by rail but elsewhere there is a reliance on road transportation. In the future, the production of DSG is uncertain as national support for coal fired power stations reduces, which could mean more importation of the mineral with associated cumulative effects on road mileage. This import (from other plan areas) is unlikely to be affected by the development control policies.</p> <p>Overall, slightly positive, but becoming more uncertain in future.</p>

⁵⁴ Desulphogypsum (DSG) is a by-product from flue gas desulphurisation processes at Drax and Eggborough power stations.

4.	+	+	?	✓	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> Gypsum extraction can lead to dust impacts mainly from construction and air pollution from transport. However, as with objective 3 air quality effects are location specific and while the current situation is arguably favourable in terms of transport, and thus emissions, effects become more uncertain over time. Transport of DSG also becomes more uncertain in the future, though it should be noted that DSG removes sulphur dioxide from flue gasses at coal fired power stations (which is positive for air pollution, though fuel gas desulphurisation would take place in any case without a market for DSG). In any event, consideration of Policy DO3 'Transport of Minerals and Waste and Associated Traffic Impacts' should help maximise opportunities to reduce transport / traffic effects.</p>
	?	?					
5.	0	0	0	✓	✓		<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> Land take from current workings is already part of the baseline, and it is expected that any future workings of gypsum elsewhere would involve underground extraction. Any impacts are likely to be location specific and commensurate with the scale of building / associated functions above ground (most likely small scale) where proposals for mining are considered. This would need to comply with the development control policies, including for the policy for the Protection of Agricultural Land and Soils, which would ensure any effects are minimised and soils re-instated. The supply of DSG is expected to have a negligible impact on land due to the synthetic gypsum being generated at established power stations.</p> <p>Uncertainty is also noted due to the policy's reliance on development control policies that are not yet adopted.</p>
	?	?	?				
6.	0	0	?	✓		✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The policy is likely to reduce traffic impacts so will reduce greenhouse gas emissions. For the same reason as SA objective 3, the situation in the longer term becomes more uncertain.</p> <p>Uncertainty is also noted due to the policy's reliance on development control policies that are not yet adopted.</p>
	+	+					
	?	?					

7.	0	0	0				<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> There are likely to be no links between this policy and the objective to adapt to climate change.</p>
8.	-	-	-	✓		✓	<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> This policy would support the extraction of mineral resources (gypsum) in general and would therefore conflict with minimising the use of resources.</p> <p>By the same token it would support supply of DSG, which is a by-product of generating energy at coal-fired power stations that would otherwise be wasted.</p>
9.	-	-	-	✓		✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> This policy supports the extraction of gypsum, which in theory might work against the principles of the waste hierarchy if it competed with the supply of DSG.</p> <p>However, the preferred policy also supports supply of DSG. DSG is a by-product of generating energy at coal-fired power stations that would otherwise be wasted. It is therefore a waste product that is being put to use and is considered potentially positive for the waste hierarchy.</p>
10.	0	0	0	✓	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The effects from the extraction of gypsum on the historic environment would be location specific and commensurate to the scale of the building works / processing above ground as predominantly this mineral is mined underground. However, such works would need to be consistent with development management policies including the 'Historic Environment' policy. While uncertainty is noted as effects are very much dependent on location, This policy is could result in effects that range from neutral to negative, though are broadly relatively insignificant in terms of the baseline (particularly as</p>

							<p>there has been no indication of any commercial interest in reactivating workings or the opening of new gypsum mines in the Plan area, and the only extant permission is already developed, but flooded). No effects on the historic environment are predicted from the supply of DSG.</p> <p>Uncertainty is also noted due to the policy's reliance on development control policies that are not yet adopted.</p>
11.	0	0	0	✓	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The effects from the extraction of gypsum on the landscape would be location specific and commensurate to the scale of the building works / processing above ground as predominantly this mineral is mined underground. However, such works would need to be consistent with development control policies including the 'landscape' policy. While uncertainty is noted as effects are very much dependent on location, this policy is likely to result in effects that could be seen as broadly relatively insignificant in terms of the baseline (particularly as there has been no indication of any commercial interest in reactivating workings or the opening of new gypsum mines in the Plan area, and the only extant permission is already developed, but flooded). No effects on landscape are predicted from the supply of DSG.</p> <p>Uncertainty is also noted due to the policy's reliance on development control policies that are not yet adopted.</p>
	?	?	?				
12.	+	+	+	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> This policy would support the supply of both gypsum and DSG with direct benefits to businesses that rely on gypsum as a construction material. It would also, through supporting both gypsum extraction and the supply of DSG, help to ensure continued supply in the face of uncertainty over future DSG supply.</p> <p>It is acknowledged that there is currently little interest in gypsum development so effects could be lower.</p>	
	+	+	+				
13.	+	+	+	✓	✓	<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are</p>	

								considered at a plan level. <u>Plan level / regional / wider effects</u> This policy could support a small number of future jobs, and while issues such as traffic may affect community vitality, the consideration of development control policies (which include 'Transport of Minerals and Waste and Associated Traffic Impacts' and 'Local Amenity and Cumulative Effects' policies) and the protection for communities in the policy would reduce negative impacts. Tentatively minor positive.
14.	0	0	0					<u>Local Effects</u> Any effects are considered to be negligible. <u>Plan level / regional / wider effects</u> Any effects are considered to be negligible.
15.	0	0	0	✓	✓	✓	✓	<u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level. <u>Plan level / regional / wider effects</u> The effects from the extraction of gypsum on health and wellbeing would be location specific and commensurate to the scale of the building works/processing above ground as predominantly this mineral is mined underground. However, such works would need to be consistent with development control policies including the "Transport of Minerals and Waste and Associated Traffic Impacts" and 'Local Amenity and Cumulative Effects' policies as well as the protection for communities in the policy. While uncertainty is noted as effects are very much dependent on location this policy is likely to result in effects that could be seen as broadly relatively insignificant in terms of the baseline (particularly as there has been no indication of any commercial interest in reactivating workings or the opening of new gypsum mines in the Plan area, and the only extant permission is already developed, but flooded). No effects on health and wellbeing are predicted from the supply of DSG.
	?	?	?					
16.	0	0	0		✓	✓		<u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.
	-	-	-					
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> The current gypsum site in Sherburn in Elmet is currently flooded so may be subject to a degree of flood risk if it re-opens (that would need to be managed) though the Water Environment development control policy should help ensure that future extraction elsewhere either avoids flooding or is flood resilient. As synthetic gypsum is generated at established power stations effects from that on flooding are not thought to be significant</p>
17.	+	+	+					<p><u>Local Effects</u> Although gypsum areas are quite local in scale, desulphogypsum could be supplied from other locations so effects are considered at a plan level.</p> <p><u>Plan level / regional / wider effects</u> The rise in house building and popularity of gypsum based building materials (plasterboard, plaster and cement) may give rise to new demand within the Plan area for this material and this option would support continued production. This would be positive in enabling the wider development needs of the population to be met from whatever source is most economical.</p> <p>It is acknowledged that there is currently little interest in gypsum development so effects could be lower.</p>

Summary of assessment The consideration of future gypsum and DSG (Desulphogypsum – a by-product produced by coal fired power stations) proposals against the development control policies should have broadly neutral / insignificant effects as future development will need to take account of a range of environment and amenity criteria. It will also potentially have a strong positive effect on the economic growth and changing population needs objectives as gypsum supply will be more secure going forward as both gypsum and DSG are supported. This could underpin future development due to gypsum’s importance as a construction material, though it is acknowledged that there is currently little interest in gypsum development so effects could be lower.

Two objectives reported mixed positive and negative effects. The ‘minimising resource use’ objective identified that support for gypsum would consume a primary natural resource on the one hand, but support for DSG would do the opposite in that it would save / offset consumption of primary gypsum. A similar effect was observed for the ‘minimising waste objective’ in that the Policy might, though supporting gypsum, allow gypsum to be extracted at the expense of utilising waste DSG as a resource. However, the Policy also supported DSG, so the market may play a role in optimising the balance between these two materials.

Recommendations There was some uncertainty noted as to the volume of gypsum that will be extracted in the future and the supply of DSG. This should continue to be monitored.

Policy M24: Supply of vein minerals

Proposals for the extraction of vein minerals, including proposals for the reactivation of dormant permissions, will be determined in accordance with the development management policies in the Joint Plan, having particular regard where relevant to any impacts on:

- i) important habitats and species;
- ii) protected landscapes;
- iii) heritage assets;
- iv) tourism assets;
- v) transport infrastructure.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> There is significant biodiversity and geo-diversity interest in areas with potential for vein minerals, including geological SSSIs which have come about through previous minerals working, but also European SPA / SAC sites, SSSIs and local</p>
	-	-	-					

								<p>SINC sites around Greenhow Hill (fluorspar) with less designated sites close to Cononley (fluorspar). Elsewhere, in areas such as the North Pennines and wider Nidderdale AONB there is a high concentration of designations along with areas of priority habitat. However, criteria to protect habitats and wildlife should help protect biodiversity from more severe effects and this policy states that particular regard should be given to important habitats and species.</p> <p>There may also be an opportunity to establish new geological sites in the future as a result of extraction.</p> <p>As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development with particular regard given to habitats and species).</p> <p>The policy's supporting text protects against impacts that may be covered by the Habitats Regulations by stating "there may also be need for Appropriate Assessment under the Habitats Regulations, depending on the location of any proposals which do come forward".</p>
2.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> There are no Source Protection Zones in Greenhow Hill or Cononley and there are few in the wider resource area. However, vein mineral extraction itself may affect local hydrology, consume water and lead to water quality impacts. As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to up to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects).</p>
3.	0	0	0		✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> Vein minerals would generally be extracted in remote locations. While there may be some potential for transportation by rail or canal in the Cononley area, in other parts of the Plan area additional road transport miles would be likely to be required. As this policy does not specifically promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects).</p>

4.	0	0	0	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> Dust may be an issue associated with the extraction and processing of vein minerals. As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects).</p>
	-	-	-				
5.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> Due to the upland character of areas where vein minerals may be extracted they are unlikely to result in a loss of best and most versatile land, however, soils, including biodiverse or higher carbon soils, may still be lost. As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects).</p>
	-	-	-				
6.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> Due to the upland character of areas where vein minerals will be extracted this policy may result in carbon emissions from energy used during construction and operation, transport and as a result of soils that may have a high carbon content (such as peaty soils) being lost. As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects)</p>
	-	-	-				
7.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> This policy has no clear relationship to climate change adaptation.</p>
8.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

	-	-	-				level effects below. <u>Plan level / regional / wider effects</u> As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development).
9.	0	0	0	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below. <u>Plan level / regional / wider effects</u> As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects in relation to waste generation will range from no effect (with no development) to minor negative (limited development).
	-	-	-				
10.	0	0	0	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below. <u>Plan level / regional / wider effects</u> As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development). The policy does however state that effects on heritage assets will be given particular regard so effects are likely to be rated as either no effect, insignificant effect or at worst minor residual effect after mitigation is applied.
	-	-	-				
11.	0	0	0	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below. <u>Plan level / regional / wider effects</u> As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to minor negative (limited development) as the policy works in combination with development management policies (and there could be some low level, possibly insignificant, residual effects). While policy criteria and other development control policies in the Plan should reduce the magnitude of effects it is likely that landscape impacts will remain at a significant level if extraction occurs, given the nature of the terrain in areas of vein mineral resource. The policy does however state that effects on protected landscapes will be given particular regard.
	-	-	-				

12.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> As this policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, effects will range from no effect (with no development) to moderate positive (limited development).</p>
	m	m	m					
	+	+	+					
13.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> This policy does not provide support or otherwise for vein minerals extraction and is unlikely to have any significant impact upon the viability and vitality of local communities.</p>
14.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> This policy does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in the future. However, there may still be potential impacts on access routes in upland areas and on views out of the Yorkshire Dales where development occurs so effects are likely to be rated as either no effect, insignificant effect or minor residual effect after mitigation is applied.</p>
	-	-	-					
15.	0	0	0		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below.</p> <p><u>Plan level / regional / wider effects</u> As this option does not promote vein mineral extraction, but plans in any case for the potential for sites to be submitted in future, so effects are likely to be rated as either no effect, insignificant effect or minor residual effect after mitigation is applied due to the possible amenity impacts of dust, noise and traffic.,</p>
	-	-	-					
16.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

								level effects below. <u>Plan level / regional / wider effects</u> There is no clear link between vein mineral extraction and flooding.
17.	0	0	0					<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below. <u>Plan level / regional / wider effects</u> There is no clear relationship between vein minerals extraction and this objective.

Summary of assessment

This policy does not provide support for the extraction of vein minerals (crystallized minerals within rock) in the Plan area; however should development come forward and gain consent, a number of negative impacts could result particularly in relation to the environmental SA objectives. This is largely because vein minerals occur close to sensitive receptors (such as wildlife sites and designated landscapes) and extraction techniques can utilise a significant area of land and can be energy intensive. However, these are all mitigated down to low and possibly insignificant levels due to development management policies elsewhere in the Joint Plan, or the protections referred to in the Policy. There may be positive economic benefits associated with this policy should new vein minerals development come forward and gain consent.

Recommendations

No mitigation proposed.

Policy M25: Borrow pits

Proposals for borrow pits, where permission is required, will be permitted where the required mineral cannot practicably be supplied by secondary or recycled material of appropriate specification from a source in close proximity to the construction project, and; where all the following criteria are met:

- i) The site lies on, or immediately adjoins, the proposed construction scheme so that mineral can be transported from the borrow pit to the point of use without significant use of the public highway system;
- ii) The site can be landscaped and restored to a high standard within an agreed timescale and to an agreed end-use without the use of imported material other than that generated on the adjoining construction project.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to lead to the creation of some borrow pits and there could therefore be a degree of harm to habitats and wildlife although any proposals would need to be in accordance with the development management policies in the Plan. There may be opportunities for enhancements for biodiversity through site reclamation in the longer term.</p>
	-	-	-					
				+				
2.	0	0	0	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to lead to the creation of some borrow pits and there could therefore be a degree of low level harm to water quality, due to disturbance of groundwater and run-off from the area around extraction which may contain dust and particles, although any proposals would need to be in accordance with the development management policies in the Plan.</p>
	-	-	-					

3.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would reduce transport miles due to the requirement for borrow pits to lie in or adjoin the construction project if the material cannot be sourced from an alternative source in close proximity to the construction project.</p>
	+	+	+					
4.	0	0	0		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whilst there will be small scale and temporary negative effects in the area immediately around the borrow pit due to dust and fumes from machinery, there will be positive effects resulting from the reduced need to transport minerals. Any proposals would need to be in accordance with the development management policies in the Plan</p>
	-	-	-					
	+	+	+					
5.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would help to protect soil and agricultural land by only supporting extraction from borrow pits where there are no other nearby options for the supply of the mineral. Sourcing from existing quarries would require less land take than numerous small borrow pits across the Plan area.</p>
6.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would reduce greenhouse gas emissions as it reduces the need to transport construction materials through adjacent / on site borrow pits or other alternative local sources.</p>
7.	0	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<u>Plan level / regional / wider effects</u> Depending on the location of the borrow pits, this policy could provide a number of opportunities for rainwater storage in the medium to longer term, once mineral extraction has ceased.
8.	-	-	-	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would allow the use of borrow pits, which is extraction of a primary resource.
9.	-	-	-	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would allow the use of borrow pits, which is extraction of a primary resource, which may dis-incentivise the use of secondary materials to some degree, though the policy does guard against this.
10.	?	?	?	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> There may be effects on the historic environment resulting from the creation of borrow pits depending on location, although any proposals would need to be in accordance with the development management policies in the Plan.
	-	-	-					
	0	0	0					
11.	?	?	?	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy may have some minor effects on the landscape should borrow pits come forward, depending on location, although any proposals would need to be in accordance with the development management policies in the Plan.
	-	-	-					
	0	0	0					
12.	+	+	+		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

								<u>Plan level / regional / wider effects</u> This policy would help to support jobs in construction projects.
13.	?	?	?		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Depending on the location of borrow pits there could be short term effects on local tourism economies during the time extraction is taking place due to visual and noise effects although any proposals would need to be in accordance with the development management policies in the Plan.
14.	?	?	?	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Depending on the location of borrow pits, there could be effects through either the loss of recreation assets such as rights of way or through harm to the visitor experience at nearby locations.
15.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Whilst there may be positive effects on communities nearby due to removing the need to transport minerals, there may also be minor and temporary negative effects for any immediately adjacent communities through noise and dust from the extraction process, although any proposals would need to be in accordance with the development management policies in the Plan.
16.	0	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Depending on the location of the borrow pits, this policy could provide a number of opportunities for rainwater storage in the medium to longer term, once minerals extraction has ceased.

17.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy provides an opportunity to ensure sufficient supply of minerals for projects that benefit a changing population whilst creating shortened supply chains in some instances.</p>

Summary of assessment This Policy would have some positive impacts in terms of reducing transport miles, reducing climate change impacts and shortening supply chains resulting in positive economic effects and a positive contribution towards meeting the needs of a changing population. However, borrow pits could also have some low level negative effects, such as possible local effects on water quality, temporary generation of dust, loss of primary resources, and impacts on the historic environment, landscape or recreation. However, these effects are generally very short term and uncertain due to being dependent on location.

Recommendations The existing development management criteria are considered sufficient to mitigate negative effects to acceptable levels.

Policy W01 - Moving waste up the waste hierarchy

- 1) Proposals will be permitted where they would contribute to moving waste up the waste hierarchy through:
 - i) the minimisation of waste, or;
 - ii) the increased re-use, recycling or composting of waste, or;
 - iii) the provision of waste treatment capacity and small scale proposals for energy recovery (including advanced thermal treatment technologies), which would help to divert waste from landfill.

- 2) Further capacity for the large scale recovery of energy from waste (in excess of 75,000 tonnes annual throughput capacity), including through advanced thermal treatment technologies, will only be permitted in line with Policy W04 and where any heat generated can be utilised as a source of low carbon energy or, where use of heat is not practicable, the efficient recovery of energy can be achieved.

- 3) The provision of new capacity for the landfill of residual non-inert waste will be permitted where it can be demonstrated that it is the only practicable option and sufficient permitted capacity within the Plan area is not available. Proposals for the extension of time at existing permitted landfill sites with remaining void space will be supported in principle, where necessary either;
 - (i) to maintain capacity for disposal of residual waste, or;
 - (ii) to achieve the satisfactory restoration of the site.

- 4) Landfill of inert waste will be permitted where it would facilitate:
 - i) a high standard of quarry reclamation in accordance with agreed reclamation objectives, or;
 - ii) the substantial improvement of derelict or degraded land where it can be demonstrated that the import of the waste is essential to bring the derelict or degraded land back into beneficial use and the scale of the importation would not undermine the potential to manage waste further up the hierarchy.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	

1.	-	-	-	✓	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective. However, there may be impacts on biodiversity as a result of waste processing in relation to the proximity of processing facilities to biodiversity / geo-diversity assets and the type of processing taking place. There may be adverse effects caused by noise and disturbance to wildlife or loss of habitat. The scale of these impacts is location and waste management type dependent. The effects from this strategic policy are therefore identified as neutral / uncertain.</p> <p>Indirectly this policy is likely to reduce the land take and carbon footprint of the products that currently comprise waste, with a corresponding benefit for global wildlife.</p>
	m +	m +	m +					
2.	-	-	-	✓	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective. However, there may be effects on water as a result of waste development commensurate to its scale and type of processing. Some waste management operations require use of water which may increase the demand for water and affect supply. Other considerations could be impacts from run-off and leachate, which may be more significant should they be located in a nitrate vulnerable zone or source protection zone. The scale of these impacts is location and waste management type dependent but is likely to be largely controlled by development management measures in this plan (we note a possible minor negative residual effect, with some uncertainty as the global water footprint of different products currently likely to be managed through the policy is not known).</p>
	?	?	?					
3.	?	?	?	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The transportation of waste is usually undertaken by road. The effects of this strategic policy would be dependent upon the locations for generation and processing of waste across the Plan area which would determine the length of journeys. The effects are therefore considered uncertain, but are to an extent controlled by other policies in this plan</p>
	?	?	?					
4.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> There may be impacts on air quality through emissions from the transportation of waste or as a by-product from waste processing, such as impacts from bio-aerosols from composting, or methane from landfill. However, processing waste higher up the hierarchy may also have positive effects (from reduced landfill through to processing in alternative ways which may reduce impacts on air quality). The scale of these impacts is specific to the location and waste management type, which would also be subject to external regulation where emissions are emitted, but in this assessment are considered minor positive.</p>
5.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Several effects may be experienced on soils/land due to waste management. The intention to manage waste as high up the hierarchy as possible may have positive implications on the sub-objective for recovering nutrient value from biodegradable waste, through composting for example, and recovering energy from waste (where the energy can be used a form of low carbon energy) would help to maximise the use the land efficiently (as it would offset the need for deriving energy from other sources which require land). Moreover, moving waste up the waste hierarchy prevents the need for the landfilling of waste (with its associated land take), replacing it with facilities that in many cases have a much smaller land footprint.</p> <p>Conversely, other forms of waste management higher up the waste hierarchy may result in some contamination of soils depending upon the type of processing due to leachate and/or spillage. On balance, there are both positive and negative effects associated with this policy, though the positive effects outweigh the negative effects.</p>
6.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u> Treatment of waste high up the waste hierarchy is likely to strongly encourage re-use and recycling within the Plan area which would be positive for climate change through the reduction in materials consumed (as materials are cycled back into the economy). This would lead to a reduction in the overall carbon footprint of the local economy.</p> <p>In addition, as this policy would only support provision of new capacity for the landfill of biodegradable waste where it can be demonstrated that that it is the only practicable management option and there is insufficient capacity available within the Plan area (there is, however, the possibility that the time periods for existing landfill could be extended), and would only support energy from waste where it can be utilised for heat or electrical energy, it is considered that this approach is likely to minimise adverse effects and predominantly have net benefit for climate change.</p>
7.	0	0	0				<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective to adapt to climate change.</p>
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> This policy would encourage waste to be processed in line with the waste hierarchy resulting in the need for fewer primary resources.</p>
9.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would directly encourage the effective management of waste and prioritise management as far up the waste hierarchy as possible. This is likely to have significant positive effects for this objective. In addition, the fact that incineration of waste would only be supported if there are plans to use the heat generated onsite would also ensure that residual wastes would be managed in a way that is higher up the waste hierarchy than incineration on its own.</p>
10.	?	?	?	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	0	0	0				

								<p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective. Impacts on the historic environment and heritage assets would be in connection to the location of waste treatment works and processing. This is not set out in this policy but is dependent upon the locations and type of waste management facility (uncertain indirect impact but largely likely to be controlled by development management measures).</p>
11.	?	?	?	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective. Impacts on the landscape would be in connection to the location of waste treatment works and processing. This is not set out in this policy but is dependent upon the locations and type of waste management facility (uncertain indirect effect).</p> <p>The policy refers to possible extensions of time at landfill sites. While this may negatively affect the landscape in the longer term, by the same token if the extension is to facilitate restoration there may be some minor long term benefits. Overall, however, this is a minor element of the overall effect, which is location dependent and uncertain.</p>
	0	0	0					
12.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to have economic benefits associated with different waste management techniques and facilities. The re-use, recycling and composting of materials creates products that can be sold and the policy could also reduce the costs borne by businesses now associated with landfill through taxation. This policy would support energy from waste, and put that energy to good use, which would have value. In addition, there is also likely to be a positive benefit for the local economy through employment.</p>
	+	+	+					
13.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					

								<p><u>Plan level / regional / wider effects</u> Effects on local communities would be dependent on whether new facilities are provided and where they are located. There is the possibility for improved local access to recycling facilities, which would be positive. In addition, some communities may benefit from the heat provided from incineration / energy from waste. Conversely, there may be negative impacts should the sites be located in places which have an effect on the local economy e.g. through affecting tourism.</p>
14.	?	?	?	✓	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	0	0	0					<p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective. Recreation can be impacted by waste management depending on its location and interference with Rights of Way or open access land given that during its operational stages there would be no access. This would be location specific however and therefore any impacts are deemed uncertain but low level (considering development management policies).</p>
15.	+	+	+	✓	✓		✓	<p>The principle of managing waste high up the waste hierarchy would not directly affect this objective. However, some benefits would be observed as the policy would limit landfill and incineration (which may have a number of amenity impacts).</p>
	-	-	-					<p>There may be negative impacts on health and well-being as a result of waste processing in relation to the proximity of processing facilities and the type of processing taking place. These effects are location specific. Particular effects to consider would be odour, noise and associated traffic movements. All are controlled by development management policies so effects are likely to be minor at worst.</p>
	?	?	?					
16.	?	?	?	✓	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	0	0	0					<p><u>Plan level / regional / wider effects</u> The principle of managing waste high up the waste hierarchy would not directly affect this objective but any locations considered for the management of waste in this way would have to consider flood risk and surface water management to avoid adverse effects (controlled largely by development management policies).</p>
17.	+	+	+	✓	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>
	+	+	+					

								level effects below as they could happen across a broad distribution.
								<p><u>Plan level / regional / wider effects</u></p> <p>The principle of managing waste further up the waste hierarchy may positively contribute towards a number of sub-objectives in relation to meeting the needs of the population including 'improving public access to facilities enabling sustainable waste management' (e.g. household waste recycling centres) and 'support community led waste management schemes'.</p>

Summary of assessment This Policy would encourage sustainable resource management by prioritising the management of waste as higher up the waste hierarchy. This results in particularly positive effects in relation to resource consumption, soils, climate change, minimising waste generation and managing waste as high up the waste hierarchy as practicable, the economy and meeting the needs of a changing population. Uncertain effects or effects which have both positive and negative aspects have been recorded against several of the other environmental and social objectives as the scale of impacts would be determined by the nature and location of the particular waste management facility.

Some objectives, such as biodiversity, climate change and soils also show strong indirect global effects as the policy in effect reduces the carbon and land footprint of many of the products that we use that currently end up reaching the end of their life in landfill. One area where minor negative effects could occur on balance is in relation to water demand, as some recycling operations can be water intensive (though the assessment is quite uncertain in relation to this).

Recommendations No mitigation is proposed as locational/development management issues will be dealt with under other policies in the Joint Plan.

Policy W02 - Strategic role of the Plan area in the management of waste

Assumptions: Adopting the principle of net self-sufficiency would require additional facilities to ensure that total capacity is equivalent to total arisings.

- 1) Support will be given through the allocation of sites and the grant of planning permission for the additional waste management capacity needed to help achieve net self-sufficiency in capacity at a level equivalent to expected arisings in the Plan area, by 31 December 2030.
- 2) Provision of capacity within the Plan area shall include provision for waste arising in the Yorkshire Dales National Park, with the exception of mining and quarrying waste and small scale waste arisings which can be appropriately managed at facilities within the National Park.
- 3) Except as provided for in 2) above, where a facility is proposed specifically to manage waste arising outside the Plan area it will not be permitted unless it can be demonstrated that the facility would represent the nearest appropriate installation for the waste to be managed.
- 4) Proposals which would help meet unforeseen needs for the management of specific waste streams arising in the Plan area but not specifically identified or provided for in the Joint Plan, will be permitted where they would be in line with the requirements of Polices W10 and W11.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+					<u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on biodiversity, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place on previously developed land and is controlled by development management measures). Some sites will also display indirect positive effects as global biodiversity is likely to benefit from the reduced carbon and land footprint of products that are managed in waste facilities higher up the waste hierarchy.
2.	-	-	-	✓		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan

							<p>level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net / cumulative effects of allocated waste sites on water, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place away from water bodies and is controlled by development management measures)...</p>
3.	+	+	+		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net / cumulative effects of allocated waste sites on transport, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity is controlled by development management measures and locational policies). However, some sites such as waste transfer sites exhibit significant positive effects. Some degree of cumulative effects is noted in relation to sites in the south of the Plan area that could mean significant negative effects may rise to moderate negative locally (but this does not change the overall assessment provided here). This is reduced by part 3b of the policy which states: "For larger scale or specialised facilities expected to play a wider strategic role (e.g. serving multi-district scale catchments or which would meet specialised needs of particular industries or businesses), these will be located where overall transportation impacts would be minimised taking into account the market area expected to be served by the facility".</p>
4.	-	-	-		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net / cumulative effects of allocated waste sites on air, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity is controlled by development management measures, environmental permitting and locational policies). However, some sites such as waste transfer sites exhibit positive effects.</p> <p>In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary.</p>

5.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net /cumulative effects of allocated waste sites on soils, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place on previously developed land and is controlled by development management measures). Some sites will also display indirect positive effects as the objective is likely to benefit from the reduced land footprint of products that are managed in waste facilities higher up the waste hierarchy. There are also some positive effects from sites that carry out composting or anaerobic digestion. Cumulatively moderate positive.</p> <p>In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. It would however secure a longer term continuation of the status quo, which arguably increases demand for waste management administered by the Plan, and may drive a portion of the demand for either larger or more facilities which demand land. This effect would be small scale due to the low population and spread of Dales communities, and in practice may not 'tip the balance' at any one particular facility.</p>
	m	m	m				
	+	+	+				
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Becoming progressively more self-sufficient in the management of waste would be likely to lead to less distance in transportation of waste and thus lower emission from vehicles, compared to it being transported to locations outside of the Plan area. However, this policy may also result in a greater number of waste management facilities which may contribute to climate change, for instance through greater use of construction materials and land (though as waste output does not change the net effect of emissions is expected to be broadly neutral) and such impacts are frequently noted in the assessments of site allocations. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. It would however secure a longer term continuation of the status quo, which already benefits climate change by limiting land loss in an area with large tracts of carbon rich soil.</p>
	-	-	-				
7.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<u>Plan level / regional / wider effects</u> Additional waste developments may cumulatively have implications for adapting to climate change as these are likely to result in increased areas of hard-surfacing (thus exacerbating run-off). However, generally recommendations for flood assessment and use of SUDS at a site specific level for allocations, and by the wider development management measures reduce effects down to non-significant.
8.	-	-	-	✓		✓		<u>Local Effects</u> Not applicable <u>Plan level / regional / wider effects</u> As this policy would be likely to mean the building of new waste facilities (and less taking advantage of larger facilities outside of the Plan area, thus avoiding economies of scale) this policy is likely to consume more resources.
9.	0	0	0					<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would not directly lead to waste being managed further up the waste hierarchy. Indirectly policy results in sites being allocated that may of which are high up the waste hierarchy, so an indirect positive effect is noted.
	+	+	+					
10.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on the historic environment, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place on previously developed land and is controlled by development management measures / locational policies). In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. It would however secure a longer term continuation of the status quo, which already benefits the historic environment by limiting land loss or other damage in an area rich in historic assets.
11.	m	m	m	✓	✓	✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on landscape, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative
	-	-	-					

								(as much waste activity takes place on previously developed land and is controlled by development management measures). However some development have cumulative landscape impacts, particularly in the south of the Plan area, and for that reason a moderate negative cumulative effect is recorded. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. It would however secure a longer term continuation of the status quo, which already benefits the landscape by limiting land loss or other damage in an area of high landscape value.
12.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy there is the potential for job creation in the waste management sector along with knock-on effects to the local economy in terms of spend and for businesses supporting the waste management sector. Lower transport costs may also benefit the wider business sector. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. This policy would, however, secure a long term continuation of the status quo which would support the economy by continuing to direct waste management jobs into the Plan area and also by allowing more sustainable options for waste management in relative proximity to the National Park (which will help keep costs down).</p>
13.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on communities, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be a mixture of minor negative (as much waste activity takes place on previously developed land away from residential areas and is controlled by development management measures) and minor positive (due to jobs) effects. Additionally policy W11 states that 'In all cases [waste] sites will need to be suitable when considered in relation to physical, environmental, amenity and infrastructure constraints including existing and proposed neighbouring land uses'. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. This policy would, however, secure a long term continuation of the status quo which would support waste management jobs in the Plan area.</p>
14.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							<p>level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on recreation, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place on previously developed land and is controlled by development management measures). In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. This policy would, however, secure a long term continuation of the status quo which would continue to avoid detrimental recreational impacts on this important recreational asset.</p>
15.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The net effect of this policy is largely the same as the net effects of allocated waste sites on health, plus any further unallocated sites that might come forward during the plan period. Thus effects are mostly predicted to be minor negative (as much waste activity takes place on previously developed land away from residential receptors and is controlled by development management measures). In addition policy W11 states that 'In all cases [waste] sites will need to be suitable when considered in relation to physical, environmental, amenity and infrastructure constraints including existing and proposed neighbouring land uses'.</p> <p>However, there is a potential cumulative effect from traffic that may occur from some sites in the south of the Plan area, but this does not change the overall assessment. This is reduced by part 3b of the policy which states: "For larger scale or specialised facilities expected to play a wider strategic role (e.g. serving multi-district scale catchments or which would meet specialised needs of particular industries or businesses), these will be located where overall transportation impacts would be minimised taking into account the market area expected to be served by the facility".</p> <p>In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park, this would represent little change from the present situation as most waste is already collected by District Councils in the National Park and disposed of outside the National Park boundary. This policy would, however, secure a long term continuation of the status quo which may have small scale negative effects on communities in the Plan area as it may require larger (or busier) facilities generating more impacts such as noise or odour, thus having potential effects on the health, safety and well-being of local communities.</p>

16.	-	-	-	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
							<u>Plan level / regional / wider effects</u> Additional waste developments may have implications for flooding should these result in increased areas of hard-surfacing (thus exacerbating run-off).
17.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+				<u>Plan level / regional / wider effects</u> The needs of the population in terms of waste management would be, in part, met through this policy.

Summary of assessment This Policy would have a range of mainly minor and often mixed effects on the SA objectives. In particular, while there are outright positive effects on the economy and population needs objectives as a result of provision of jobs and ensuring that an effective waste management system operates, minor negative effects are observed across most of the other SA objectives as cumulatively allocated sites plus further planning permissions are likely to exhibit residual effects on objectives after they have been controlled by other policies in the plan (for instance land will be used up, traffic will be generated, buildings will be constructed and impacts such as dust and odour may occur at low levels). Some objectives also report indirect positive impacts such as biodiversity and soils, as a result of decreased carbon and land footprints. Some sites such as waste transfer sites exhibit significant positive effects on transport, so this also shows up in this assessment which notes both positive and negative effects for transport. In terms of providing capacity within the Plan area to deal with waste arising in the Yorkshire Dales National Park this would largely maintain the status quo in terms of how waste is managed from the National Park, and this would have mainly neutral effects on the Plan area and modest benefits for the Yorkshire Dales as it will allow the special qualities of the National Park to be maintained.

Recommendations No further mitigation is proposed.

Policy W03 - Meeting waste management capacity requirements - Local Authority Collected Waste

Net self-sufficiency in capacity for management of Local Authority Collected Waste will be supported through:

- 1) Identification of the Allerton Park (WJP08) and Harewood Whin (WJP11) sites as strategic allocations over the Plan period for the management of LACW. Proposals to extend the time period for continued waste management operations at these sites over the Plan period and the development of other appropriate waste management infrastructure will be permitted subject, in the case of the Harewood Whin site, to compliance with relevant national and local Green Belt policy.
- 2) Delivery of additional transfer station capacity for LACW to serve the needs of Selby District through the allocation of a site at Common Lane, Burn (WJP16). Proposals for development of transfer capacity for LACW at this site or at an alternative location consistent with the site locational and identification principles in Policies W10 and W11 will be permitted.
- 3) Permitting proposals for:
 - a. increased capacity for the recycling and treatment of LACW where this would reduce reliance on export of waste from the Plan area and the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - b. improvements to the Household Waste Recycling Centre network.
- 4) Proposals for development at the allocated sites referred to in 1) and 2) above will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u>

							<p>Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential biodiversity / geodiversity effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11's favouring of previously developed land as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to involve at least some minor and temporary biodiversity / geodiversity effects, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>	
2.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential water effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11's emphasis on considering environmental constraints). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to possibly involve minor and temporary water effects without mitigation, but magnitude will be reduced (in most cases to insignificant) by development management policies. The overall effect is considered minor negative.</p>
3.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							<p>level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential traffic effects (though these effects will be reduced by W10's emphasis on minimising the transport effects of strategic sites and W11 favouring of co-located development as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to have a traffic impact, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>	
4.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential air pollution effects (though these effects will be reduced by W10's emphasis on minimising the transport effects of strategic sites and W11's emphasis on considering environmental constraints as well as the development management policies (particularly the Local Amenity and Cumulative Effects policy)). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to have an air quality impact, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>
5.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential soil / land effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11 favouring of previously developed land as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to potentially involve minor effects on land, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>	

6.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential traffic or plant emissions of greenhouse gases (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and emphasis on minimising the transport effects of strategic sites and W11 favouring of co-located development as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to have a traffic impact and an impact from the carbon footprint of built infrastructure, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>
7.	0	0	0	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential impacts on key elements of the response to climate change, such as flood risk mitigation or ecological networks (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11's emphasis on considering environmental constraints as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to have a climate adaptation impact, but the magnitude of impacts will be reduced by development management policies. The overall effect is considered negligible to minor negative.</p>
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Not applicable. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting and supporting improvements to the Household Waste Recycling network is likely to result in new development. This will be considered alongside the Sustainable Design development management policy, which will potentially reduce development's material footprint. Moreover, these facilities will themselves process thereby saving resources.</p>

9.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> All of the facilities covered by this policy will play an important role in moving waste up the waste hierarchy.</p>
10.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential historic environment effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11 favouring of previously developed land as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to involve possible minor historic environment effects, depending on location, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>
11.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new landscape effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11 favouring of previously developed land as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to involve possible landscape effects, depending on location, but magnitude will be reduced by development management policies. The overall effect is considered minor negative.</p>
12.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							<p>level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to have strong benefits on the economy SA objective. It will generate jobs and promote low carbon resources from what previously would have been considered waste. It will also reduce the costs in comparison to alternative disposal in landfill.</p>	
13.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> As stated for objective 12 there will be strong employment benefits which may benefit communities.</p> <p>Supporting additional proposals for recycling, reprocessing and composting may also generate new community vitality effects such as effects on tourism (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11's emphasis on considering amenity constraints as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. These sites are unlikely to have negative effects on community vitality and may even positively affect it (as people may make trips to an HWRC combined with a trip to a local town).</p>
	-	-	-					
14.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate recreation effects (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and steer away from national parks and AONBs and W11's favouring of previously developed land as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to involve possible effects on recreation, but these are likely to be insignificant.</p>

15.	-	-	-		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new health and wellbeing effects (though these effects will be reduced by W10's minimisation of transport impacts and W11's emphasis on considering amenity constraints as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development which could generate amenity effects such as noise and odour. These effects will be reduced by the development management policies (particularly Local Amenity and Cumulative Impacts).</p>
16.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process.</p> <p><u>Plan level / regional / wider effects</u> Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential impacts on flood risk (though these effects will be reduced by W10's maximisation of capacity within the existing facility network and W11's emphasis on considering environmental constraints as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to have a potential effect on flooding though this will be mitigated to insignificant levels by the Water Environment development management policy. The overall effect is considered negligible to minor negative.</p>
17.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>

Summary of assessment

For this Policy Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) have been assessed separately as part of the site assessment process as they each have quite different sustainability impacts.

Supporting additional proposals for recycling, reprocessing and composting may also generate new facilities with potential environmental and community effects

(though these effects will be reduced by Policies W10 and W11 as well as the development management policies). Similarly, supporting improvements to the Household Waste Recycling network may result in new development. Again, the effects of this development are considered to potentially involve minor effects on the environment and community objectives that will be reduced by development management policies. The effects on the environmental and community objectives are considered to range from insignificant to minor negative.

This Policy is likely to have strong benefits on the economy SA objective. It will generate jobs and promote low carbon resources from what previously would have been considered waste. It will also reduce the costs associated with alternative disposal in landfill. There are also strong benefits for the minimising resources and waste hierarchy SA objectives as this development is essential for reducing waste.

Recommendations Mitigation has been proposed in relation to Allerton Park (WJP08), Harewood Whin (WJP11) and Common Lane Burn (WJP16) in the Site Assessment appendix of the Sustainability Appraisal.

Policy W04 - Meeting waste management capacity requirements - Commercial and Industrial waste (including hazardous C&I waste)

- 1) Net self-sufficiency in capacity for management of C&I waste will be supported through:
 - i) Permitting proposals which would deliver increased capacity for the recycling and treatment of C&I waste, particularly where this would reduce reliance on export of waste from the Plan area and the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - ii) Permitting proposals for additional transfer station capacity for C&I waste where it can be demonstrated that additional provision would help reduce overall impacts from road transport of waste and the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - iii) Providing large scale capacity for recovery of energy and anaerobic digestion for C&I waste through a combination of spare capacity within the Allerton Waste Recovery Park facility and the Southmoor Energy Centre (WJP03), former ARBRE Power Station (WJP25) and North Selby Mine anaerobic digestion (WJP02) sites, which are identified in the Plan as allocated sites for these uses. The development of the WJP02 site will only be permitted where it would be consistent with the principles of including land in the York Green Belt;
 - iv) Permitting additional energy recovery capacity for C&I waste where the planning authority can be satisfied that the facility would be appropriately scaled to meet unmet needs for management of residual C&I waste arising in the area and the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - v) Subject to energy recovery capacity becoming operational at the allocated sites referred to in part iii) of this Policy, permission will not be granted for further large scale energy recovery for C&I waste where the waste to be recovered would arise mainly outside the Plan area, unless it can be demonstrated that the facility would represent the nearest appropriate installation for the waste to be recovered and the development would be consistent with the site locational and identification principles in Policies W10 and W11.
- 2) Provision of capacity for management of C&I waste is also supported through site allocations for recycling, transfer and treatment of C&I waste at:
 - Land at Halton East, near Skipton (WJP13)
 - Land at Tancred, near Scorton (WJP18)
 - Land at Skibeden, near Skipton (WJP17)
 - Land at Allerton Park, near Knaresborough (WJP08)
 - Land at Seamer Carr, near Scarborough (WJP15)
 - Land at Common Lane, Burn (WJP16)
 - Land at Pollington (WJP22)
 - Land at Fairfield Road, Whitby (WJP19)
 - Land at Harewood Whin, Rufforth (WJP11)
- 3) Proposals for development of the allocated sites referred to in 1) and 2) above will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							Part 2 of this policy refers to specific allocations for C and I waste sites. Management of waste at the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Report.
1.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to biodiversity and geodiversity although the degree of harm would depend on the location and type of any new facilities and is also likely to be moderated by the development management policies in the plan (specifically the 'Biodiversity and Geodiversity' and 'Sustainable Design' policies). As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission impacts are considered to have been dealt with through their respective applications.</p> <p>As the policy supports recycling, treatment, transfer and energy recovery of waste consistent with policies W10 and W11, an indirect positive effect on global biodiversity is also noted, as this will move waste up the waste hierarchy thereby reducing the carbon and land footprints of disposable products currently in circulation (helping to avoid the habitat loss that using land and carbon entails).</p> <p>Overall, effects on this objective are mixed minor positive and negative.</p>
2.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> While most impacts from this policy will be moderated by the environmental permitting / licensing regimes there may still</p>

								be risks such as fuel spills, or changes to drainage due to compaction of soils during construction / creation of areas of hard standing. These are likely to be controlled by the development management policies (including policy D: 09 'Water Environment'). As for the strategic sites, Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission so impacts are considered to have been dealt with through their respective applications.
3.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> On the one hand this policy supports recycling and/or reprocessing and the treatment of C&I waste to reduce reliance on the export of waste (positive), while on the other hand the policy would allow export of landfill and relies on export of hazardous C and I waste (negative). The distance hazardous waste in particular would need to travel would be dependent on the delivery of site allocations in other plans which add a degree of uncertainty as to the magnitude of the negative impact.</p> <p>While development management policy D:03 'Transport of Minerals and Waste and Associated Traffic Impacts' would help reduce traffic impacts from sites for waste management, this policy is likely to result in hazardous waste from diffuse sources being exported to locations outside of the Plan's control. Fuel costs should ensure that waste generators seek out the nearest available options for disposal. In addition, the potential for mitigation is limited as the supporting text to the policy states that the arisings are very small scale.</p> <p>As for the strategic scale sites, Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission so impacts are considered to have been dealt with through their respective applications.</p> <p>To some extent the policy's positive effects may offset negative effects, so while mixed effects are recorded, there may in actual fact be a neutral effect depending on the location of facilities.</p>
	-	-	-					
	?	?	?					
4.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p>
	-	-	-					
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> Assuming that emissions permitting regimes operate effectively it is still possible that there would be some residual effects on air quality including bio-aerosols from landfill depending on location in relation to sensitive receptors. These effects are likely to be moderated to a large degree by the 'Local Amenity and Cumulative Impacts' development management policy (D: 02). Effects on traffic emissions are likely to result in mixed effects for the reasons outlined in objective 3.</p> <p>As for the strategic scale sites, Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission so impacts are considered to have been dealt with through their respective applications.</p>
5.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to soils and land although the degree of harm would depend on the location and type of any new facilities and is also likely to be moderated by the development management policies in the plan (specifically the 'Protection of Agricultural Land and Soils' and 'Reclamation and Afteruse' policies. As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission, impacts are considered to have been dealt with through their respective applications.</p> <p>Overall, effects on this objective are mixed minor positive and negative.</p>
6.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to generate new facilities for C and I waste which will have a carbon footprint. However, these same facilities are also likely to move waste up the waste hierarchy, which is positive for climate change, and will also provide</p>
	-	-	-					
	?	?	?					

								<p>for more local waste management options for commercial C and I waste. Additionally according to the supporting text hazardous waste must be exported. This is likely to result in mixed effects for climate change.</p> <p>As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission, impacts are considered to have been dealt with through their respective applications.</p>
7.	0	0	0					There are no clear links between this policy and the objective for adapting to climate change.
8.	+	+	+	✓			✓	<p><u>Local Effects</u> Not applicable. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy is, through its support for increased capacity for the recycling and/or reprocessing and the treatment of C&I waste, likely to have very positive effects as this will save future resource use. As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission, impacts are considered to have been dealt with through their respective applications.</p>
9.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy is, through its support for increased capacity for the recycling and/or reprocessing and the treatment of C&I waste likely to have very positive effects on moving waste up the waste hierarchy.</p> <p>As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission impacts are considered to have been dealt with through their respective applications.</p>
10.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

								<p>level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to the historic environment although the degree of harm would depend on the location and type of any new facilities and is also likely to be moderated by the development management policies in the plan (specifically the 'Historic Environment' policy). As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission, impacts are considered to have been dealt with through their respective applications.</p> <p>Overall, effects on this objective are considered residual minor negative.</p>
11.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to the landscape although the degree of harm would depend on the location and type of any new facilities and is also likely to be moderated by the development management policies in the plan. As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission impacts are considered to have been dealt with through their respective applications.</p> <p>Although not a landscape designation, the development of the WJP02 site will only be permitted where it would be consistent with the principles of including land in the York Green Belt which would reduce specific effects from this site.</p> <p>Overall, effects on this objective are considered residual minor negative.</p>
12.	m +	m +	m +		✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to provide cost effective outlets for the management of C and I waste by largely planning for greater self-sufficiency. It will also support local jobs. The exception to this is the lack of provision for hazardous C and I waste, which may impose additional costs on some businesses. However, these businesses are likely to be small in number given the low volumes of hazardous waste dealt with. Utilisation of spare capacity at extant strategic sites is likely to be positive for their viability. Broadly positive.</p>

13.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Whilst the option may provide positive effects in terms of job creation (as detailed under objective 12) it may have negative effects on the vitality of a community depending on the location and scale of any development. This is, however, expected to be mitigated to a degree by the development management policies, particularly D: 02 'Local Amenity and Cumulative Impacts'. The overall cumulative effect is considered here to be both minor positive and minor negative.</p> <p>An additional negative effect arises through the export of hazardous waste. Here problems may arise as sites outside the Plan area experience continued demand for their services which may on the one hand sustain some jobs, though on the other hand may also sustain negative perceptions in the area immediately adjacent to such a site. However, in most cases such sites will be remote to all but a few properties and are not considered significant.</p>
	+	+	+					
14.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> While it is possible that recreational assets could be affected by the policy, most development covered by the policy is relatively small scale and mitigated by the development management policies, particularly D02 'Local Amenity and Cumulative Impacts'.</p>
15.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p>
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> Any negative perceptions associated with living in proximity to hazardous waste sites would be avoided through this policy (but only in this Plan area). However, there may still be negative effects on wellbeing from living close to a range of waste management facilities associated with recycling and reprocessing (such as noise, dust, odour etc.) To a large degree these will be mitigated to a low level by the development management policies, though some smaller scale residual effects may remain depending on location.</p> <p>As the strategic scale sites of Allerton Waste Recovery Park, Southmoor and Arbre already have planning permission impacts are considered to have been dealt with through their respective applications.</p> <p>An additional negative effect may arise through the export of hazardous waste. Here problems may arise as sites outside the Plan area experience continued demand for their services. Effects on community health and wellbeing (such as increased noise / traffic) may be generated as a result. However, in most cases such sites will be remote to all but a few properties so effects are not considered significant.</p>
16.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Flood risk is likely to be largely mitigated for by the development management policies in the plan.</p>
17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy will help ensure that waste is more likely to become a future resource. In some cases, particularly energy from waste (though this is limited by the policy), this is likely to benefit a changing population by helping with energy security.</p>

Summary of assessment This Policy has both positive and negative effects in relation to many of the objectives. This is because it supports the management of waste higher up the waste hierarchy and away from landfill, which has benefits in terms of reducing the land take and amenity impacts of simply landfilling waste, though the facilities for waste management higher up the waste hierarchy will themselves have a land footprint or amenity impacts (though this will largely be

controlled by the development management policies and locational principles in the Joint Plan).

Some effects are outright positive, for instance strong positive effects were noted for the minimising resource use and minimising waste objectives. Other impacts were related to the transport of waste, for which there are benefits through reducing reliance on exporting waste for recycling and/or reprocessing (resulting in shorter journeys), while there are lesser negative effects associated with exporting hazardous waste. This results in mixed effects for the transport, air quality and climate change objectives.

Positive effects were noted for the economy objective (due to the greater local focus being more cost effective for industry and supporting local jobs) and the changing population objective (as there may be benefits such as increased energy security). Elsewhere in the assessment, uncertainty was noted as effects were seen as highly dependent on location.

A potential effect was noted in relation to community vitality and health and wellbeing. This is because hazardous waste will be managed outside of the Plan area, which will in effect mean that some small scale noise and traffic effects may be exported and also negative perceptions of any properties close to hazardous waste sites may endure. However, such disposal sites may be remote from community receptors so the effect is considered insignificant.

Recommendations Most negative effects are moderated by the development management policies down to low levels.

Policy W05 - Meeting waste management capacity requirements - Construction, Demolition and Excavation waste (including hazardous CD&E waste)

- 1) Net self-sufficiency in capacity for management of CD&E waste will be supported through:
 - i) Permitting proposals which would deliver increased capacity for recycling CD&E waste where the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - ii) Permitting proposals for additional transfer station capacity for CD&E waste where it can be demonstrated that additional provision would help reduce overall impacts from road transport of waste and the development would be consistent with the site locational and identification principles in Policies W10 and W11;
 - iii) Permitting proposals for additional landfill capacity for CD&E waste where it would be consistent with the principles set out in Policy W01 parts 3) and 4);
 - iv) Permitting proposals for extending the time allowed to use remaining void space at existing CD&E landfill sites that are the subject of time-limited permissions.

- 2) Provision of capacity for management of CD&E waste is also supported through site allocations for:
 - i) Allocations for recycling of CD&E waste:
 - Land at Potgate Quarry, North Stainley (WJP24)
 - Land at Allerton Park, near Knaresborough (WJP08)
 - Land at Darrington Quarry, Darrington (MJP27)
 - Land at Barnsdale Bar, Kirk Smeaton (MJP26)
 - Land at Went Edge Quarry, Kirk Smeaton (WJP10)
 - Land at Duttons Farm, Upper Poppleton (WJP05)

 - ii) Allocations for landfill of CD&E waste:
 - Land at Brotherton Quarry, Burton Salmon (WJP21)
 - Land at Duttons Farm, Upper Poppleton (WJP05)
 - Land adjacent to former Escrick Brickworks, Escrick (WJP06)

Proposals for landfill at sites WJP05 and WJP06 will only be permitted as a means of enabling reclamation of any mineral workings developed in connection with allocations MJP52 and MJP55 as relevant.

Sites MJP26, MJP27, WJP10 and WJP05 are located in the Green Belt and any development will need to comply with relevant national and local Green Belt policy.

3) Proposals for development of the allocated sites for recycling or landfill referred to in 2) above will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
	See Site Sustainability Appraisal Report for scoring for each individual site							Part 2 of this policy refers to specific allocations for CD and E waste sites. Management of waste at the sites specified in this policy may result in a range of impacts in relation to the Sustainability Appraisal objectives. Each site has been individually assessed as part of the site assessment methodology and the results are presented in the Site Sustainability Appraisal Report.
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities is likely to result in a level of harm to biodiversity and geo-diversity although the degree of harm would depend on the location of any new facilities. Potential effects are also likely to be controlled through the development management policies (particularly 'Biodiversity and Geo-diversity').</p> <p>Enabling quarry reclamation through landfilling could have positive effects in terms of biodiversity in the longer term, though in the shorter term quarry floor habitats may be lost.</p>
2.	-	-	-		✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							<p>level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> The development supported under this policy could have effects on water quality from run-off from construction sites or built infrastructure, though leachate from landfill is likely to be dealt with through the environmental permitting regime. More generally, effects are likely to be dependent on location and controlled through the development management policies.</p> <p>There would also be effects in terms of use of water and generation of waste water through the recycling process, however this would be controlled through the water abstraction licensing system and through environmental permits. Effects are likely to be minor negative residual effects at worst.</p>
3.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Effects in terms of transport would depend on the location of any new facilities (notwithstanding the allocations listed which are assessed individually). However, by ensuring sufficient provision within the Plan area this will reduce the need for transportation over further distances with an overall positive effect. Transfer facilities supported by the policy will also reduce the number of vehicles on roads. The exception to this is in relation to hazardous CD&E waste where provision would be outside of the Plan area. Overall the effect is minor positive with some minor uncertainty.</p>
	?	?	?				
4.	+	+	+		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p>
	-	-	-				

								<p><u>Plan level / regional / wider effects</u> Locally there is the possibility of minor air quality issues around sites from dust and traffic, and also from the construction of new sites (controlled to low levels by the policy D02 'Local Amenity and Cumulative Effects'). However, by ensuring sufficient provision within the Plan area this will reduce the need for transportation over further distances with consequent benefits on air quality more generally. Dealing with hazardous CD&E waste is highly regulated so although this may be moved further, air quality effects from this are not likely.</p>
5.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> As policy W11 'Waste Site Identification Principles' favours previously developed, industrial and employment land as well as quarry voids, effects on land and soils are likely to be limited. However, the use of CD&E waste for quarry reclamation and to improve derelict or degraded land is highly positive. Overall the effect on land is very positive.</p>
6.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Increasing the capacity for recycling of CD&E waste as well as supporting the delivery of additional transfer station capacity will have positive effects on climate change. This is because recycled CDE waste will reduce the need for new building materials which may require significant carbon to extract and process, and also because net traffic will be reduced.</p> <p>On the other hand the policy does allow the use of landfill (where waste cannot be dealt with higher up the waste hierarchy). Although biodegradable CD&E materials (e.g. wood) may well be managed higher up the waste hierarchy, the policy would still allow the possibility that they be landfilled, so a negative is recorded here (as in landfill such materials may degrade releasing greenhouse gases).</p>

7.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> It is possible that new CDE waste developments will contribute towards flooding through the creation of additional developed areas, thus exacerbating run-off and increasing flood risk. However, when considered together with policy D09 'Water Environment', effects are likely to be minimal.</p>
8.	m +	m +	m +	✓		✓	<p><u>Local Effects</u> Not applicable. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy would have positive effects against this objective because it deals with CD&E waste by recycling it. Landfilling is permitted for quarry restoration (though this must be consistent with W01's requirement not to undermine the waste hierarchy). This will help to reduce the demand for resources.</p>
9.	m +	m +	m +	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy would have positive effects against this objective because it deals with CD&E waste by recycling it. Landfilling is permitted for quarry restoration (though this must be consistent with W01's requirement not to undermine the waste hierarchy). This will help to move waste up the waste hierarchy.</p>
10.	0 +	0 +	0 +	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p>

							<p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to the historic environment although the degree of harm would depend on the location of any new facilities. However, as this policy works in combination with policy W11 'Waste Site Identification Principles', which favours previously developed, industrial and employment land as well as quarry voids, the impact is likely to be at a very low level as such areas may have lost their archaeology already, or may be either screened from historic assets or surrounded by other industrial facilities (so these waste sites may be less out of character in such locations). This is also likely to be controlled through the development management policies (particularly 'Historic Environment').</p> <p>Enabling quarry reclamation could have positive effects in terms of the historic environment as it may help restore historic landscape character.</p>
11.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Support for new facilities may result in a level of harm to the landscape / townscape although the degree of harm would depend on the location of any new facilities. However, as this policy works in combination with policy W11 'Waste Site Identification Principles', which favours previously developed, industrial and employment land as well as quarry voids, the impact is likely to be at a very low level as CD&E waste facilities may be either screened (as in a quarry void) or may fit relatively well with their surroundings (e.g. in an industrial setting). Any effects are also likely to be controlled through the development management policies (particularly 'Landscape'). We have noted minor negative residual effects.</p> <p>Enabling quarry reclamation could have positive effects in terms of the landscape as it may help restore landscape character.</p>

12.	+	+	+		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to add value to materials that were previously seen as wastes, and, through supporting new proposals (and allocating sites) to deliver increased capacity, new jobs are likely to be generated.</p>
13.	-	-	-		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to deliver some new jobs which may benefit communities. Due to this policy working in combination with policy W11 'Waste Site Identification Principles', which favours previously developed, industrial and employment land as well as quarry voids, as well as the development management policies, other longer term effects on community vitality are seen as less likely.</p> <p>An additional negative effect arises through the export of hazardous CD&E waste. Here problems may arise as sites outside the Plan area experience continued demand for their services which may on the one hand sustain some jobs, though on the other hand may also sustain negative perceptions in the area immediately adjacent to such a site. However, in most cases such sites will be remote to all but a few properties.</p>
14.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Using CD&E waste to enable quarry reclamation could have positive effects in terms of recreation opportunities. Otherwise effects are likely to be limited due to this policy working in combination with policy W11 and the development management policies.</p>
15.	-	-	-		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

	?	?	?				<p>level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> While there may be negative impacts on communities close to CD&E facilities in terms of noise, dust, traffic etc., mostly significant effects will be avoided due to this policy working in combination with policy W11 'Waste Site Identification Principles', which favours previously developed, industrial and employment land as well as quarry voids (which will in many cases mean that CD&E development takes place away from residential areas). In addition, development management policies such as D02: 'Local Amenity and Cumulative Effects' should significantly reduce any effects.</p> <p>An additional negative effect may arise through the export of hazardous CD&E waste. Here problems may arise as sites outside the Plan area experience continued demand for their services. Effects on community health and wellbeing (such as increased noise / traffic) may be generated as a result. However, in most cases such sites will be remote to all but a few properties.</p> <p>Quarry restoration through utilising CDE waste could generate some positive effects in the longer term.</p> <p>We have rated the effect to be at most minor negative, with a possible indirect positive effect in the longer term. Some uncertainty is noted as it not known which locations outside of the Plan area hazardous waste would go to.</p>
16.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> It is possible that new CD&E developments will contribute towards flooding through the creation of additional developed areas, thus exacerbating run-off and increasing flood risk. However, when considered together with policy D09 'Water Environment', effects are likely to be minimal.</p>

17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. See also Site Sustainability Appraisal Report.</p> <p><u>Plan level / regional / wider effects</u> Supporting the recycling of CD&E waste is likely to have positive effects on the environment as it will cycle materials back into the construction sector, which will ultimately facilitate the development that populations need to prosper.</p>

Summary of assessment. This Policy has a range of mixed effects. Many SA objectives report both minor positive and negative effects because while new facilities may be built to support the policy (having potentially negative effects on biodiversity and generating dust, noise, local traffic and carbon which affect a number of other objectives such as air and wellbeing), utilising CD&E waste to regenerate land or for quarry restoration will often restore degraded land, which, depending on the restoration proposed, could bring a range of sustainability benefits. The 'restoration' aspect of this Policy is the key reason why a strong positive effect is noted for the soils and land SA objective.

In a similar way some objectives noted both a neutral or minor negative effect and a positive effect, largely because policies elsewhere in the Joint Plan would reduce any negative effects, but the positive effects of quarry restoration would still occur. This occurs with the historic environment and landscape objectives. Other strong positives are noted for the minimising resources and minimising waste SA objectives, which identified that more recycling of CD&E waste would reduce demand for new materials to be extracted and also reduce demand for disposal of materials. This can add value to what was once a waste, bringing economic benefits.

A potential negative effect was noted in relation to community vitality and health and wellbeing. This is because hazardous CD&E waste will be managed outside of the Plan area, which will in effect mean that some small scale noise and traffic effects may be exported and also negative perceptions of any properties close to hazardous waste sites may endure. However, such disposal sites are often remote from community receptors so the effect is considered low.

Recommendations Effects are largely mitigated by other plan policies leaving only residual effects.

Policy W06 - Managing agricultural waste

<p>1) Proposals for the on-farm management of agricultural waste at the point of arising, including proposals for individual farm-scale anaerobic digestion, will be permitted where the proposed development would assist in moving waste up the waste hierarchy and would be appropriately scaled in relation to the arisings requiring management.</p> <p>2) Proposals scaled to provide capacity for the management of agricultural waste from more than one agricultural holding, including facilities for the anaerobic digestion of agricultural waste, will be permitted where they would be consistent with the overall locational principles and site identification principles for waste development in Policies W10 and W11 and would help to move waste up the waste hierarchy in accordance with Policy W01.</p>								
<p><i>SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs</i></p>								
SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> It is uncertain what the impact of this option would be on biodiversity and geodiversity as effects are dependent on the location of on-farm management or off-farm facilities, including proposals dealing with more than one agricultural holding including AD facilities. Land take, leachate from off and on-farm management, as well as localised nutrient loading of soils may, in the wrong place lead to some negative impacts on biodiversity, however this would be likely to be of minor significance in most cases, particularly given wider development management policies.</p> <p>Clear links in the supporting text to policy D09 on the water environment would further lessen effects.</p>
2.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					

							<p><u>Plan level / regional / wider effects</u> On-farm management of waste has the potential to generate leachate to water bodies. Assuming the environmental permitting and exemption⁵⁵ regime works satisfactorily (as well as the proposed water environment (DO9) development management policy) this should not be particularly significant (though minor negative residual effects – such as accidental spills or low level leaching may still occur). Similarly, proposals dealing with more than one agricultural holding, including AD facilities, may have the potential to contribute to pollution if mismanaged or in storm events, though both permitting and DO9 should moderate this significantly.</p> <p>There are positive effects associated with on-farm composting and the biodigestate fertiliser that may result from Anaerobic Digestion. Using biodigestate can represent an effective way of applying the nutrients from on-farm wastes (such as slurries and manures) to land, or can offset the use of inorganic alternative fertilisers. This reduces potential for over application and pollution (as over application of slurries and manures is a cause of nutrient pollution of watercourses⁵⁶). Similarly, when composted materials are used on farm, this reduces the need for alternative fertilisers (which are an important source of water pollution).</p> <p>Clear links in the supporting text to policy D09 on the water environment would further lessen effects.</p>
3.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Managing waste on farm where practicable will support a general reduction in traffic levels (though given that much waste is already managed on farm this will likely be minor). In addition, where facilities serving more than one farm are required (as those facilities must accord with the plan's locational principals at W10) the positive effect would be enhanced. The net effect is felt to be at least minor positive.</p>
4.	0	0	0		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

⁵⁵ See Environment Agency, 2010. Agricultural Waste Exemptions – a look up guide [URL: http://a0768b4a8a31e106d8b0-50dc802554eb38a24458b98ff72d550b.r19.cf3.rackcdn.com/LIT_7533_9650f6.pdf]

⁵⁶ See DECC / DEFRA, 2011. Anaerobic Digestion Strategy and Action Plan [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69400/anaerobic-digestion-strat-action-plan.pdf]

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Supporting on-farm management of waste at the point of arising may create some localised issues associated with bio-aerosols and odours which may cause a nuisance. Similar effects may occur with facilities for multiple farm holdings. These issues can be readily avoided / mitigated for by policies elsewhere in the plan (e.g. D02 Local Amenity and Cumulative Impacts) and by the pollution control / exemptions regime. The net effect is likely to be insignificant as most facilities will be remote from receptors.
5.	+	+	+		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Some on-farm wastes, such as composted wastes, can play an important role in increasing the nutrient status of farm soils. In addition, supporting anaerobic digestion creates a renewable source of biodigestate, which will directly replace synthetic fertilizers and inefficient spreading of slurries and manures. So, in a farm context, this may mean that the fertility of organic wastes is efficiently returned to the soil ⁵⁷ . If other off-farm wastes, such as food waste from rural food manufacturing businesses, are taken by the facility there is an even greater benefit, as this can make a significant contribution to reducing landfill. This may make it advantageous to slightly alter the policy to add wording akin to 'additional organic waste streams may be acceptable at agricultural anaerobic digestion facilities provided that they serve a local need and comply with the overall policy'. One possible area for concern is where crops are specifically grown for biodigestate production, which could have a significant negative impact on this objective as land that potentially could be used for food production may instead be used as a source of feedstock for AD. This adds uncertainty to the assessment.
	+	+	+				
	?	?	?				
6.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan
	+	+	+				

⁵⁷ See DECC / DEFRA, 2011. Anaerobic Digestion Strategy and Action Plan [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69400/anaerobic-digestion-strat-action-plan.pdf]

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Maximising the amount of waste managed on farm would reduce transport emissions and thus contribute positively to reducing greenhouse gas emissions. In addition, this policy supports on and off farm anaerobic digestion. As well as digestate, AD's other product is biogas. This can be used as a source of electricity or fuel to offset the utilisation of fossil fuels. Heat can also be derived from the energy transformation to electricity in a combined heat and power system. This will help significantly reduce carbon emissions. This would be further enhanced by this policy's link to policy W11 (Waste Site Identification Principles) which supports co-location. Digestate also displaces the embodied energy of fertiliser and saves about 5 tonnes of CO ₂ for every one tonne of nitrogen fertiliser ⁵⁸ .
7.	0	0	0		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Supporting on farm waste management would support on farm composting, which can play a role in enhancing water retention in soils. For other on farm wastes there is no clear link to climate adaptation.
	+	+	+				
8.	+	+	+	✓		✓	<u>Local Effects</u> Not applicable.
	+	+	+				

⁵⁸ See DECC / DEFRA, 2011. Anaerobic Digestion Strategy and Action Plan [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69400/anaerobic-digestion-strat-action-plan.pdf]

								<p><u>Plan level / regional / wider effects</u> Supporting on-farm waste management and facilities for off-farm management supporting a number of farms would often minimise resource use as many wastes will be composted or may be utilised in on-farm anaerobic digestion facilities. While some on-farm wastes may have traditionally been landfilled either on or off farm (though less since regulatory changes have discouraged this⁵⁹), this policy supports moving farm waste up the waste hierarchy.</p> <p>As this policy offers strong support for AD it is worth noting that as AD potentially captures biogas, heat and digestate from a range of farm wastes such as crop residues, slurries and manures, It effectively minimises the requirement for buying in resources such as fertilisers. All in all this policy will lead to very positive effects.</p>
9.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Generally the objective, when considered alongside the permitting and exemption regime for farm waste, would encourage on farm composting and recycling, and support facilities for more specialist waste management. So waste would tend to be managed higher up the waste hierarchy. This is likely to be highly positive, however, it should be recognised that a significant proportion of farm waste is already dealt with on farm. The strong emphasis on AD also allows for value and usable products (biogas, heat and digestate) to be obtained from waste streams which adds to the positive effects recorded.</p>	
10.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> It is uncertain what the impact of this option would be on the historic environment as effects are dependent on the location of on-farm management or off-farm facilities, including proposals dealing with more than one agricultural holding including AD facilities. Mostly effects would be insignificant. However, any significant effects are likely to be managed to insignificant levels given the wider development management policies.</p>	

⁵⁹ In practice, regulations (principally the Waste Management Regulations 2006 (Agricultural Waste Regulations) and Environmental Permitting Regulations, 2010) should discourage on farm landfill to a degree (as a permit is required to continue to landfill)

11.	0	0	0	✓		✓		<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	?					<u>Plan level / regional / wider effects</u> While on-farm waste management may be a visible feature in the landscape, it is generally considered to be of very low significance and often an accepted part of the landscape. Off-farm specialist waste management facilities have an uncertain impact, though given they will be considered alongside locational and site identification principles (which emphasise making use of the existing facility network and co-location / re-use of redundant buildings) impacts are expected to be low.
12.	+	+	+		✓	✓		<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> Managing farm waste on site where possible, and supporting this with more specialised sites should help support some jobs, but these are expected to be at a low level. In terms of the support for AD through this policy, where digestate or energy can be sold this could represent a significant income stream for a farm, which may support a low number of jobs.
13.	0	0	0					<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> Though limited jobs may be supported this would be an insignificant level in relation to this objective.
14.	0	0	0					This preferred policy, particularly when considered in combination with other referenced policies, is unlikely to have a significant effect.
15.	0	0	0					<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan

							<p>level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Supporting on-farm management of waste / AD or off farm management may create some localised issues associated with bio-aerosols and odours which may cause a nuisance. This may impact upon the wellbeing of local people living close to on-farm waste facilities or off-farm specialised waste facilities. These issues can be readily avoided / mitigated for by policies elsewhere in the plan (e.g. D02 Local Amenity and Cumulative Impacts and W11 Waste Site Identification Principles).</p>
16.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy, particularly when considered in combination with other referenced policies, is unlikely to have a significant effect.</p>
17.	0	0	0				<p><u>Local Effects</u> This preferred policy, is unlikely to have a significant effect.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy, is unlikely to have a significant effect.</p>

Summary of assessment For most objectives this Policy displays either positive effects or neutral effects. In particular the Policy performs very positively against the resource use and waste minimisation objectives, in part because it encourages lower resource use and moves waste up the waste hierarchy by supporting anaerobic digestion. It also performs well for the soils and land objective because of the benefits of utilising organic farm wastes in composts (which are routinely made on farms) or as biodigestate for improving the productivity of land. However, this same objective records some uncertainty that crops may be grown as a feedstock for an anaerobic digestion facility (a type of waste management system which allows some wastes to break down without oxygen), which if this were to happen could negatively impact on land as it may displace food crops.

A minor negative effect was noted in relation to biodiversity due to the possible combined effect of land take and leachate (leachate is the liquid residue that can wash away from decomposing wastes) from off and on-farm facilities as well as localised nutrient loading of soils (where soils become so fertile they suffer from problems, such as the growth of aggressive weeds) from on-farm facilities still being significant even after other policies mitigating policies are applied. Similarly the water objective noted the positive effects of using biodigestate (a type of fertiliser produced in anaerobic digestion facilities) and compost as fertilisers, but also the potentially minor negative effect of run off and leachate from sites, though this would be largely mitigated by development management policies in the Plan.

Recommendations It may be advantageous to slightly alter the Policy to add wording akin to 'additional organic waste streams may be acceptable at agricultural anaerobic digestion facilities provided that they serve a local need and comply with the overall policy'. This would further enhance benefits, particularly to the land / soils objective.

Clear links in the 'key links to other relevant policies' box to Policy D09 on the water environment, would further lessen any effects on aquatic biodiversity and water bodies.

Policy W07 – Managing low level (non-nuclear) radioactive waste

Proposals for management of Low Level Radioactive Waste arising in the Plan area will be permitted where they would assist in moving management of the waste up the waste hierarchy through on site treatment and reuse or, where this is not practicable, enable the on site disposal of the waste at the point of arising.

Proposals for new capacity, where this would not be located at the point of arising, should be in line with the requirements of Policies W10 and W11 and other relevant policies in the Joint Plan.

Capacity requirements which cannot be met within the Plan area will be met through export.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Effects from the development of low level radioactive waste management facilities in the Plan area could range from insignificant to minor negative depending on the scale, type and location of the facility. Although it would be reasonable to assume that there could be some level of harm on biodiversity/geo-diversity potentially through habitat loss or disturbance, in practice volumes of LLRW are likely to be low as disposal options are likely to come through either an existing facility for waste management being modified to receive low level waste or a new facility jointly managing this waste stream with other waste streams (so impacts are unlikely to be wholly attributable to individual plants and are more likely to come through small facilities for the reception / transfer of such wastes allied to other plant). Similarly, for energy minerals, on-site management might have some low level impacts, though re-injection of NORM (the naturally occurring radioactive waste material associated with extraction of energy minerals) to depleted strata, is likely to require only a minimal land take. There is significant uncertainty over the type of facility that may ultimately be used.</p>
	?	?	?					

2.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> At the low volumes considered by this policy effects are likely to be small scale, especially since disposal to water would be tightly regulated. The greatest concern would be from contamination of Source Protection Zones, though it would be unlikely that this would be allowed by an environmental permit. Leaks or spills (e.g. from NORM associated with hydrocarbon extraction) would seem to be the key way that a significant effect could occur, though with such tight regulation this is thought to be unlikely.</p>
3.	+	+	+	-	-	-	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> It is likely that the main waste contributors would be from the main urban areas within the Plan area (e.g. science facilities at York or health facilities without their own specialist incinerator), or possibly from the hydrocarbons industry, but that any future volumes would be very small scale. The policy goes some way to seeking to manage this waste locally so a positive effect is noted. However, given new sources of waste from science activity or possible NORM waste could come on stream volumes could grow at a low level and effects would be mixed depending on whether export or local management is favoured.</p>
4.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Any impacts to air from this waste stream would be strictly regulated by an environmental permit. However, some impacts to air may come from traffic, which on the one hand would be reduced through possible local management or on site disposal options, or on the other hand would continue to occur where there is a need to due to continued export. Given new sources of waste from science activity or possible NORM waste could come on stream volumes could grow at a low level and effects would be mixed depending on whether export or local management is favoured. However, given current low volumes the assessment rates effects as most likely to be insignificant.</p>

5.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Effects from the development of low level radioactive waste management facilities in the Plan area could range from insignificant to minor negative depending on the scale, type and location of the facility. Although it would be reasonable to assume that there could be some level of harm to land/soils through land take, in practice volumes of LLRW managed are likely to be low as disposal options are likely to come through either an existing facility for waste management being modified to receive low level waste or a new facility jointly managing this waste stream with other waste streams (so impacts are unlikely to be wholly attributable to individual plants and are more likely to come through small facilities for the reception / transfer of such wastes allied to other plant). Similarly on site management might have some low level impacts, though re-injection of NORM to depleted strata is likely to require only a small land take though contamination of land is a possible risk if accidents occur. There is significant uncertainty over the type of facility that may ultimately be used.</p>
	?	?	?				
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Any carbon input to air from this waste stream may come from traffic, which on the one hand would be reduced through possible local management or on site disposal options, or on the other hand could rise due to continued export. Given new sources of waste from science activity or possible NORM waste could come on stream volumes could grow at a low level and effects would be mixed depending on whether export or local management is favoured.</p>
	-	-	-				
7.	0	0	0				There is no direct link between the policy and the objective to adapt to climate change.
8.	?	?	?	✓	✓	✓	<p><u>Local Effects</u> <u>Not applicable.</u></p> <p><u>Plan level / regional / wider effects</u> Enabling LLRW to be treated up the waste hierarchy may have positive effects on this objective subject to its treatment enabling re-use or recycling. This is currently uncertain as recycling LLRW waste may not be practical for some materials.</p>

9.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Enabling LLRW treatment further up the waste hierarchy would have a positive effect on this objective to effectively manage waste. The development of specialist facilities within the Plan area could bring waste management closer to self-sufficiency within the Plan area as well. Given the limited scope for some materials to move significantly up the waste hierarchy coupled with the low volumes that may be dealt with positive effects are limited.</p>
	0	0	0					
10.	-	-	-	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Effects from the development of low level radioactive waste management facilities in the Plan area could range from insignificant to minor negative depending on the scale, type and location of the facility. Although it would be reasonable to assume that there could be some level of harm on the historic environment potentially through land take or changes to character, in practice volumes of LLRW are likely to be low as disposal options are likely to come through either an existing facility for waste management being modified to receive low level waste or a new facility jointly managing this waste stream with other waste streams (so impacts are unlikely to be wholly attributable to individual plants and are more likely to come through small facilities for the reception / transfer of such wastes allied to other plant). Similarly on site management might have some low level impacts, though re-injection of NORM to depleted strata is likely to require only a small land take. There is significant uncertainty over the type of facility that may ultimately be used.</p>
	?	?	?					
11.	-	-	-	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	?	?	?					

							<p><u>Plan level / regional / wider effects</u> Effects from the development of low level radioactive waste management facilities in the Plan area could range from insignificant to minor negative depending on the scale, type and location of the facility. Although it would be reasonable to assume that there could be some level of harm on the landscape potentially through visible structures or changes to character, in practice volumes of LLRW are likely to be low as disposal options are likely to come through either an existing facility for waste management being modified to receive low level waste or a new facility jointly managing this waste stream with other waste streams (so impacts are unlikely to be wholly attributable to individual plants and are more likely to come through small facilities for the reception / transfer of such wastes allied to other plant). Similarly on site management might have some low level impacts, though re-injection of NORM to depleted strata is likely to require only relatively small scale and temporary facilities. There is significant uncertainty over the type of facility that may ultimately be used.</p>
12.	0	0	0		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The baseline states that the Plan area produces small amounts of LLRW to be processed in comparison to other waste streams which may mean that new facilities may not be viable. While this may grow in future it may still be at a low level, though a small income stream might result from this preferred policy. As there could be effects, albeit small scale effects on landscape, biodiversity and the historic environment, and as the policy would allow for facilities anywhere in the Plan area there may be small effects on tourism, though this is likely to be relatively insignificant.</p>
			+				
13.	0	0	0		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As there could be effects, albeit small scale effects on landscape, biodiversity and the historic environment, and as the policy would allow for facilities anywhere in the Plan area (including designated landscapes) there may be small effects on tourism. Therefore communities that depend on tourism could be negatively affected, though this effect is likely to be relatively insignificant.</p>
14.	?	?	?				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Effects from the development of low level radioactive waste management facilities in the Plan area would depend on the scale, type and location of the facility. In relation to recreation and leisure the effects are uncertain, but may be insignificant.
15.	0	0	0				<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Any impacts to humans would be strictly regulated by external bodies. This would minimise risks arising from the treatment of LLRW.
16.	0	0	0				<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As the location of local facilities is unknown any flood risk is also unknown. However any facilities would be considered highly vulnerable from a flood risk perspective, so the water environment policy would control effects to non-significant levels.
17.	0	0	0				No clear link

Summary of assessment Mostly the effects of this Policy are small scale as the volume of LLR (low level radioactive waste) is expected to be low⁶⁰ and most significant impacts would be regulated through the environmental permitting regime. There could however be small impacts associated with land take, changes to character resulting from small built structures or low level changes in traffic levels as a result of this Policy. This leads to low level negative effects (with considerable uncertainty) on the biodiversity, soil, climate change, historic environment, and landscape objectives with mixed positive and negative effects on the transport objective. There are low level positive effects on the waste management and economy (longer term only) objectives. Elsewhere effects are either uncertain or no effects are observed.

Recommendations Effects are mitigated by other policies in the Joint Plan so no mitigation is proposed.

⁶⁰ There is some uncertainty over the actual amount as some Naturally Occurring Radioactive Material is generated by shale gas extraction

Policy W08 - Managing waste water (sewage sludge)

Proposals for the development of new infrastructure and increased capacity for the management of waste water and sewage sludge will be permitted in line with requirements identified in asset management plans produced by waste water infrastructure providers active in the Plan area. Preference will be given to the expansion of existing infrastructure in appropriate locations rather than the development of new facilities. Where it is not practicable to provide required additional capacity at existing sites, support will be provided for the development of new sites for the management of waste water and sewage sludge in line with the requirements of Policies W10 and W11.

Co-location of anaerobic digestion capacity with waste water treatment infrastructure will be supported in principle where the Anaerobic Digestion capacity to be provided would utilise output from the associated treatment works, where it would be of a scale appropriate to the location of the host waste water treatment site and where compliance with the development management policies in the Joint Plan can be demonstrated.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be effects on biodiversity and geo-diversity through loss of land or disturbance caused by new infrastructure / increased capacity at sites. Where new sites are required W11 requires a preference for previously developed land or lower quality agricultural land. In many cases this will avoid biodiversity, though these land resources can themselves be associated with biodiversity. It is assumed that effects on biodiversity in watercourses (through waste entering watercourses) would be avoided through the treatment process working effectively as this is regulated. Overall, by giving</p>
	+	+	+					

							<p>preference to the expansion of existing sites it is likely that any effects on biodiversity would be limited.</p> <p>Co-location of AD facilities with treatment works may also have a land take, though disturbance effects from any facility from noise, traffic etc. would be minimised.</p> <p>Uncertainty was initially noted in the Habitat Regulations Assessment of Likely Significant Effects as the policy is not location specific (it is not clear where new infrastructure would be located). Effects such as accidental water pollution (e.g. during a flood event) could affect adjacent watercourses which in turn could affect riparian Natura 2000 sites. However, the policy includes wording to remove this uncertainty by stating that any development would need to be compliant with development management policies in the Plan.</p> <p>A further link to policy D07 (biodiversity) in the 'key links to other relevant policies' box would be beneficial.</p>
2.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> It is assumed that the treatment process will operate effectively as it is regulated and therefore supporting such developments (as they clean up waste water) will have positive effects on the water environment.</p>
3.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> By giving preference to expansion of existing sites this may reduce or negate the need for additional traffic related to plant maintenance. Co-location of AD facilities with treatment works is likely to reduce the need to transport AD feedstock which will reduce traffic.</p>

4.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be localised effects on air quality resulting from release of bio aerosols or odours. However, by seeking to expand existing facilities over the creation of new ones this is likely to reduce any potential effects overall (though could increase local effects).</p> <p>Bio-aerosols are not a serious concern from AD facilities unless they have attached composting facilities.⁶¹</p>
5.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whilst there is likely to be a loss of soil through this option, the preference for expanding existing facilities is considered to be a positive approach because it reduces need for overall land take considering such requirements as access tracks etc. Similarly the co-location of AD facilities with treatment works would benefit from shared access.</p> <p>The hierarchy of preference for brownfield and then lower quality agricultural land for new water treatment developments promoted by W11 is likely to further reduce any negative effects on this objective.</p>
6.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Waste water treatment stations are not insignificant users of energy⁶² and the option will therefore lead to increased energy use and therefore negative effects against this objective. However, by preferring expansion of existing facilities it is likely that more efficient use can be made of energy. Co-location with AD facilities may allow for some energy use to be offset.</p>

⁶¹ Environment Agency, 2012. Guidance for developments requiring planning permission and environmental permits [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297009/LIT_7260_bba627.pdf]

⁶² US Environmental Protection Agency, 2013. Energy efficiency in water and wastewater facilities [URL: <http://www.epa.gov/statelocalclimate/documents/pdf/wastewater-guide.pdf>]

7.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Development / expansion of facilities in floodplains may increase flood risk through the creation of additional hard surfacing and the physical loss of land on which water would naturally flow onto during times of flood. Many existing facilities are located in river corridors. Sewage treatment (if adequate measures to control pollution and manage sewage during flooding events are in place) and water treatment facilities (which do not need to remain operational during times of flood) are considered 'less vulnerable' to flooding, as are waste treatment facilities (including AD facilities), so sequential testing will be required prior to allocation or planning approval. Flood plain compensatory storage may also be required.</p>
8.	+	+	+	✓		✓		<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> Co locating AD facilities with waste water / sewage treatment facilities could potentially maximise the value recovered from liquid wastes prior to return to water bodies which would save resource use elsewhere.</p>
9.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Whilst this is a form of waste management it is not traditionally classed as recycling although does enable water to be re-used and will therefore have positive effects against this objective. Similarly, co locating AD facilities with waste water / sewage treatment facilities could potentially recover sludges etc. from liquid wastes and convert them to usable products (such as bio-digestate or biogas).</p>
10.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be effects on historic assets through new development or expansion at sites, although these are generally located away from the main clusters of historic assets. By giving preference to the expansion of existing sites it is likely that any effects on the historic environment would be limited. Similarly, links with W11, which gives a second preference to previously developed land, is also likely to minimise effects.</p>

11.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be effects on the landscape through new development or expansion of sites, although the majority are located away from the nationally protected landscapes. By giving preference to the expansion of existing sites it is likely that any effects on the landscape would be limited. Similarly, links with W11, which gives a second preference to previously developed land, is also likely to minimise effects.</p>
12.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be minor positive effects through the creation of jobs at new sites or in relation to upgrades to sites, along with temporary jobs created through the construction process. Moreover, where water /sewage treatment facilities are co-located with AD facilities usable and higher quality products (biogas, bio-digestate) could be derived from what may otherwise have been either a waste or applied to agricultural land as a 'bio-solid'.</p>
13.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The provision of waste water treatment works will help to maintain communities and enable them to grow, thus having a positive effect against this objective.</p>
14.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be effects on recreation opportunities through new development, co-located AD development or extensions to sites, either through loss of assets or through negative effects on the recreation experience. By giving preference to the expansion of existing sites, or through W11 requiring a second preference for previously developed land, it is likely that any effects on recreational resources would be limited.</p>
15.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

	-	-	-					<u>Plan level / regional / wider effects</u> The development of such facilities will contribute towards the overall health and wellbeing of communities however there may be negative effects related to construction (traffic, dust etc.), or the dispersal of bio-aerosols or odours depending on proximity to communities.
16.	-	-	-	✓		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Development / expansion of facilities in floodplains may increase flood risk through the creation of additional hard surfacing and the physical loss of land on which water would naturally flow onto during times of flood. Many existing facilities are located in river corridors. Sewage treatment (if adequate measures to control pollution and manage sewage during flooding events are in place) and water treatment facilities (which do not need to remain operational during times of flood) are considered 'less vulnerable' to flooding, as are waste treatment facilities (including AD facilities), so sequential testing will be required prior to allocation or planning approval. Flood plain compensatory storage may also be required.
17.	+	+	+	✓		✓		<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option will have a strong positive effect by providing facilities to support the population in line with identified requirements. Indeed water treatment underpins the further development of local settlements.

Summary of assessment Mostly the sustainability effects of this Policy are small scale and minor and may be positive or negative. For instance, minor negative effects are associated with the objectives for air, adaptation to climate change, historic environment, landscape and flooding in part because the facilities supported by the Policy have a physical land take, would be likely to be located close to water and through traffic, construction activities and bio-aerosols, would impact upon air. Some objectives (such as the biodiversity, land use, climate change and health and wellbeing objectives) displayed mixed positive and negative effects because while the processes that take place may intrinsically have negative effects associated with them, co-location with AD (anaerobic digestion) and the expanding of existing sites allows for new positive effects such as reduced additional land take or the offsetting (i.e. the cancelling out of impacts by making savings somewhere else) of energy use⁶³ to take place. For the health and wellbeing objective, waste water treatment is on the one hand seen as essential for health and wellbeing while on the other hand could have local amenity effects.

The Policy performs particularly strongly against the resource use and waste hierarchy objectives as co-locating AD facilities with waste water / sewage treatment facilities will help turn waste materials into economically valuable resources. Sewage / water treatment also underpins the further development of settlements so

⁶³ If existing sites are expanded it is assumed they might be more energy efficient as they may benefit from shared facilities and services.

performs well against the changing population needs objective.

Recommendations Negative effects associated with this Policy have already largely been reduced by this Policy. However, sequential testing of waste water treatment plants for flooding will be required prior to allocation or planning approval. Flood plain compensatory storage may also be required.

Policy W09 - Managing power station ash

Proposals to increase the utilisation of power station ash and Incinerator Bottom Ash as secondary or recycled aggregate or for other beneficial use, in line with Policy M11 for the Supply of Alternatives to Land Won Primary Aggregate, will be permitted.

Where ash cannot be utilised for beneficial purposes, support will be given for the continued disposal of power station ash at the existing Gale Common and Barlow ash disposal sites, which are safeguarded as strategic sites for the disposal of waste.

Proposals for new facilities for the management of power station ash and Incinerator Bottom Ash will be determined in accordance with the requirements of Policies W10 and W11.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+					
	?	?	?					<u>Plan level / regional / wider effects</u>

								<p>Continued disposal and utilisation of the resource at these sites may have minor negative effects on biodiversity, provided that ash disposal and utilisation stays within the current boundaries of the Gale Common and Barlow sites. This is because at these sites continued disposal and recycling may cause problems with dust, which could blow onto adjacent habitat in windy conditions, or may cause leachate ingress from lagoons or vehicle wash-down facilities. For instance, pulverised fuel ash is initially likely to be alkaline⁶⁴ which may change the PH of soils, and thus their ecology. Without controls dust may be a local issue, generally close to the site and roads. Similarly dust, run off or leachate may find its way into nearby watercourses. This may be an issue where there are local woodland, grassland or water receptors near to these sites (each of these sites have at least some receptors). Environmental permits and other planning controls would, however, be expected to significantly reduce the significance of this.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on biodiversity due to the footprint of any site and other effects such as dust deposition (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures..</p> <p>These local negative effects contrast with the positive benefits of offsetting at least some primary aggregate extraction, which is likely to have benefits for biodiversity / geo-diversity.</p>
2.	0	0	0	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Continued disposal and utilisation of the resource at these sites may have impacts on nearby watercourses through run off. In addition, Barlow borders a NVZ while Gale Common lies within a NVZ, which indicates that water resources are already coming under pressure. Effects of power station ash on water can include increased alkalinity and sodicity (i.e. high in salts). Environmental permits and other planning controls would be expected to significantly reduce the</p>

⁶⁴ See Korcak, R. Coal Combustion Residues as Soil Amendments: Surface coal mining. US Department of Agriculture Agricultural Research Service [URL: <http://citeseerx.ist.psu.edu/viewdoc/download?doi=10.1.1.198.611&rep=rep1&type=pdf>], Wikipedia. Pulverised Fuel Ash

							<p>significance of this.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on water due to the risk of run off (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures.</p> <p>These local negative effects contrast with the positive benefits of offsetting at least some primary aggregate extraction, which is likely to have benefits for the water environment.</p>
3.	0	0	0	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As ash is usually transported to disposal sites by pipeline, traffic associated with this element of the policy is not likely to be significant. The utilisation of power station ash as a secondary aggregate is, however, likely to result in an increase in road transportation in order to transport material to markets/site of intended use.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on traffic, depending on location (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures..</p>	
	-	-	-				
	?	?	?				
4.	0	0	0	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Without mitigation, ash might blow around and effect nearby settlements to Gale Common and Barlow, thus lowering air quality. Assuming that this option would support extraction of secondary aggregate from the listed disposal sites, if</p>	
	-	-	-				
	+	+	+				
	?	?	?				

							<p>unmitigated, this might cause some additional problems where settlements are nearby. However, in practice, the NPPF and development management policies in this plan ensure ash dust is controlled to low (and probably insignificant) levels.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on pollution from traffic and dust generation, depending on location (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures..</p> <p>Providing support for the use of ash as a secondary aggregate may reduce the requirement for primary extraction. This may result in a positive impact in relation to air quality at primary aggregate extraction sites elsewhere.</p>
5.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The sites referred to in the option are extant sites so the direct effect on the baseline for soils / land would be insignificant. However, indirectly there may be a reduced land take from primary aggregate extraction elsewhere, because to some extent this is offset to a degree by this option.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on soils due to the footprint of any site and other effects such as dust deposition (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures.</p>
	?	?	?				
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although this policy could support a new site as well as existing sites, this policy will reduce the land take of primary extraction sites and it will reduce the energy required to extract and transport aggregates which will increasingly benefit greenhouse gas reduction over time.</p>

7.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> Not applicable
8.	+	+	+	✓		✓		<u>Local Effects</u> Not applicable <u>Plan level / regional / wider effects</u> This option offsets the use of primary aggregates and replaces them with a secondary aggregate source.
9.	+	+	+	✓		✓		<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option utilises a significant waste (power station ash) and utilises it as a resource.
10.	-	-	-	✓		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Although the sites for disposal will remain the same as prior to plan production some additional activity may result from greater utilisation of sites as a source of secondary aggregate. This may create some low level visual disturbance and generate road journeys causing vibration and dust. This may have a minor effect on the nearby listed buildings at Womersley near Gale Common, as well as on the scheduled monuments near to sites (1 near Gale Common and 2 near Barlow). The policy does allow for management of power station ash at new facilities, which could have negative effects on the historic environment, depending on location, due to the footprint of any site and effects on setting (and adds an element of uncertainty to the assessment). The use of power station ash as a secondary aggregate may reduce the need for extraction of primary resources. This may result in an indirect positive impact in relation to this objective (dependent on the location/sensitivity of the potential primary aggregate extraction sites that would no longer be required / required to a lesser degree) though effects would be low as effects will be constrained by policy W11 and development management measures.

11.	0	0	0	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be some low level visual disturbance to receptors such as houses near these sites. These are extant sites where visual disturbance is already high. Supporting use of power station ash as a secondary aggregate may reduce the need for primary extraction elsewhere which would have a positive impact in terms of landscape and townscapes.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on the local landscape, depending on location (and adds an element of uncertainty to the assessment) though effects would be low as effects will be constrained by policy W11 and development management measures.</p>
	-	-	-					
	+	+	+					
	?	?	?					
12.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This objective captures value from a waste stream by creating a saleable product and may support a low number of local job opportunities. However, this is likely to be minor.</p> <p>The policy does allow for management of power station ash at new facilities which could generate some further jobs.</p>
13.	-	-	-	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As noted above, a low number of jobs may be created as a result of this policy, which may benefit community vitality in communities near to extant sites. Traffic associated with the utilisation of power station ash as aggregate may affect communities, but it is not anticipated that this will affect trade (e.g. from tourism) at a high rate. Effects are mixed minor positive and minor negative effects.</p> <p>The policy does allow for management of power station ash at new facilities which could generate some further jobs, or could have other effects on communities which are dependent on location (so uncertainty is noted) though effects would be low as effects will be constrained by policy W11 and development management measures.</p>
	+	+	+					
	?	?	?					

14.	-	-	-		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The sites referred to in the option are all extant sites so the effect on the baseline for recreation and leisure would be insignificant. It is assumed that utilisation of ash would be from within these sites.</p> <p>The policy does allow for management of power station ash at new facilities, which could have negative effects on recreation if, for example, footpaths are diverted or the setting of recreational resources is affected. This is dependent on location (so some uncertainty is noted) though effects would be low as effects will be constrained by policy W11 and development management measures.</p>
15.	0	0	0	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Increased activity at these sites may create some local problems of dust and increased lorry movements. Mitigation measures (such as wheel washing) and perhaps traffic management measures should be applicable which should help reduce impacts to acceptable levels. These are likely to happen because of NPPF policy, even without mitigation measures in the plan. The use of power station ash as a secondary aggregate may reduce the need for extraction of primary resources. This may result in a positive impact in relation to this objective (dependent on the location of the potential primary aggregate extraction sites that would no longer be required).</p> <p>The policy does allow for management of power station ash at new facilities which could generate some further jobs (positive for wellbeing), or could have other negative effects on human receptors which are dependent on location (so uncertainty is noted) though effects would be low as effects will be constrained by policy W11 and development management measures.</p>
16.	0	0	0				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> As it is assumed ash for use as secondary aggregate would largely come from extant sites this would have no effect on the baseline. However, the policy does allow for management of power station ash at new facilities, which could have negative effects on flooding through changing land drainage, which adds some minor uncertainty, though effects would be low as such effects will be constrained by policy W11 and development management measures.</p>
17.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As the sites currently used for disposal are assumed to be the source of ash as a secondary aggregate, and each of these sites is close to key potential markets in the south of the Plan area, the effects on the sub objective 'to shorten supply chains for building materials' are positive. However, the policy does allow for management of power station ash at new facilities which could further support this SA objective.</p>

Summary of assessment

There are some minor negative effects on biodiversity, water, local air quality and the historic environment, as well as less certain minor negative effects on landscape, community vitality (for which there are also some positive effects associated with employment) and health and wellbeing associated with this Policy, arising out of localised problems such as dust generation, possible runoff / leachate and traffic, all of which would be likely to be controlled by development management measures in the plan to acceptable levels. These may however be offset to a degree by positive environmental and social effects, particularly in relation to reduced land take, resulting from lower levels of primary minerals extraction (i.e. extraction of 'new' minerals from the ground) should support for use of power station ash result in less demand / need for this primary extraction.

The Policy does allow for management of power station ash at new facilities which could generate some further effects which are dependent on location (so uncertainty is noted in many places in the assessment) though effects would be low as they will be constrained by Policy W11 and development management measures.

There are some major positive effects associated with climate change, minimising the use of resources and minimising waste generation resulting from the potential for power station ash to reduce demand for primary aggregates, and minor positive effects associated with the economy and meeting the needs of the population.

Recommendations

It is considered that other development management policies in the Joint Plan, combined with environmental permitting would mitigate for the issues relating to dust, water pollution and air quality that have been identified in this assessment. No further mitigation is proposed.

Policy W10 - Overall locational principles for provision of new waste capacity

The allocation of sites and determination of planning applications should be consistent with the following principles:

- 1) Providing new waste management capacity within those parts of the Plan area outside the North York Moors National Park and the Areas of Outstanding Natural Beauty, unless the facility to be provided is appropriately scaled to meet waste management needs arising in the designated area and can be provided without causing unacceptable harm to the designated area.
- 2) Maximising the potential of the existing facility network by supporting the continuation of activity at existing time limited sites with permission, the grant of permission for additional capacity and/or appropriate additional or alternative waste uses within the footprint of existing sites and, the extension to the footprint of existing sites.
- 3) Supporting proposals for development of waste management capacity at new sites where the site is compatible with the requirements of Policy W11; and the site is located as close as practicable to the source/s of waste to be dealt with. This means:
 - a) For new facilities serving district scale markets for waste, particularly LACW, C&I and CD&E waste, or for facilities which are not intended to serve the specialised needs of particular industries or businesses, giving priority to locations which are within or near to main settlements in the area (identified on the key diagram) or, for facilities which are intended mainly to serve localised needs for waste management capacity in more rural parts of the Plan area, including agricultural waste, where they are well-located with regard to the geographical area the facility is expected to serve;
 - b) For larger scale or specialised facilities expected to play a wider strategic role (e.g. serving multi-district scale catchments or which would meet specialised needs of particular industries or businesses), these will be located where overall transportation impacts would be minimised taking into account the market area expected to be served by the facility.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	m +	m +	m +	✓	✓	✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					

								<p><u>Plan level / regional / wider effects</u></p> <p>This preferred policy would, through making best use of the existing facility network, reduce impacts on biodiversity / geodiversity as less land would be used (so less biodiversity would be lost).</p> <p>Supporting capacity at new sites may have some biodiversity / geodiversity impacts depending on the footprint of the site and constraints on and around it. However, the preference in policy W11 for land such as previously developed land, industrial sites, former quarries etc. should reduce the likelihood of major impacts (as in most cases such areas are of relatively low biodiversity value (though there are a number of exceptions to this, such as biodiverse brownfield sites).</p> <p>Similarly, in relation to the National Park and AONBs, because inappropriately scaled / unacceptable development will be discouraged, and because many of the most significant biodiversity resources are in those areas, effects are expected to be positive. While an indirect effect may be that some sites are directed out of these areas, where lesser negative effects may occur.</p> <p>The emphasis on locating sites as close as possible to sources of waste and which minimise transport impacts would have some minor benefits on species as traffic, and thus wildlife road casualties or disturbance, would be lessened.</p>
2.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					

							<p><u>Plan level / regional / wider effects</u> This is a positive preferred policy, because making use of the existing facility network is likely to prevent significant water pollution as existing sites are already likely to have avoided or mitigated for impacts to water.</p> <p>Supporting capacity at new sites may have some water impacts. However, the waste site identification principles consider environmental and cumulative impacts, and other policies in the plan including for water should moderate any impacts to low levels and most likely insignificant levels, particularly considering that decisions made through the planning process will also work in parallel with the regulatory / environmental permitting process.</p> <p>In relation to the National Park and AONBs, because inappropriately scaled / unacceptable development will be discouraged, and some of the significant groundwater Source Protection Zones and Nitrate Vulnerable Zones are in those areas (though equally many are distributed outside these areas) effects are expected to be positive. However, elsewhere in the Plan area some development that would otherwise occur in the National Park and AONBs may occur.</p> <p>The emphasis on locating sites as close as possible to sources of waste, and on sites which minimise transport impacts, would have some minor benefits on water as traffic, and thus water impacts from traffic on roads, will be reduced.</p> <p>Some uncertainty is noted as other policies in the plan, including W11 development management policies are not yet finalised.</p>
3.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The emphasis on locating sites as close as possible to sources of waste and, for those sites which play a wider strategic role, seeking to minimise transport impacts, would have major positive effects on transport.</p> <p>Making best use of the existing facility network may mean that more journeys will be made to the same sites which, depending on their location, may increase the local impacts of transport. Additionally, this policy equates to less likelihood of major development in remote protected landscapes, which may mean that longer journeys are required between those areas and waste management facilities. These additional effects reduce the overall benefits to minor positive.</p>
4.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u> As the transport impacts of this preferred policy are positive, air pollution impacts from traffic will also be positive. However, as making best use of the existing facility network may mean that more journeys will be made to the same sites; depending on their location this may increase the negative local air quality impacts of transport.</p> <p>For other air pollution from waste management the waste site identification principles consider environmental, amenity and cumulative impacts and, along with other policies in the plan including for local amenity and cumulative impacts (D02), should moderate any impacts to low and most likely insignificant levels, particularly considering that decisions made through the planning process will also work in parallel with the regulatory / environmental permitting process.</p> <p>Overall the effect is thought to be minor positive.</p>
5.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The emphasis on making the best use of existing sites should significantly reduce land take as the need for new infrastructure on areas of land will be lessened (though will continue to occur at a lessened rate where new sites are needed).</p> <p>However, the policy also equates to less development in remote protected landscapes, which may mean that more large development is directed to non-protected areas which may be more likely to be on best and most versatile land. However, policy W11's preference for previously developed land etc. and the development control policy D12 for protection of agricultural land and soils should moderate most effects (a minor negative indirect impact is noted).</p>
	+	+	+				
	-	-	-				
6.	m	m	m	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy, through emphasis on the existing facility network, could also reduce the requirements for new supporting infrastructure such as access roads and buildings, all of which would have had a carbon footprint (though carbon impacts will continue to occur at a lessened rate where new sites are needed).</p> <p>Moreover, the emphasis on locating sites as close as possible to sources of waste and, for those which play a wider</p>
	+	+	+				

								<p>strategic role, seeking to minimise transport impacts, would have particularly positive effects on transport emissions and thus the climate change objective.</p> <p>However, the policy also promotes less development in remote protected landscapes, which may mean that longer journeys are required between those areas and waste management facilities. This will generate greenhouse gases at a low level. Overall effects are moderate positive.</p>
7.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
8.	+	+	+	✓		✓		<p><u>Local Effects</u> Not applicable</p> <p><u>Plan level / regional / wider effects</u> This preferred policy will reduce material requirements as it makes the best use of the existing waste management network, so the materials footprint of new buildings, access roads etc. will be avoided (though will continue to occur at a lessened rate where new sites are needed).</p>
9.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As this preferred policy seeks to deliver waste management capacity, and as it works in combination with other policies in the plan (e.g. 'W01: Moving Waste up the Waste Hierarchy'), it is a critical part of moving waste up the waste hierarchy.</p>
10.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy would, through making best use of the existing facility network, reduce impacts on the historic</p>

								<p>environment as less land would be used (so less historic environment would be lost).</p> <p>Supporting capacity at new sites may have some heritage impacts depending on the footprint of the site and constraints on and around it, however, the preference in policy W11 for land such as previously developed land, industrial sites, former quarries etc. should reduce the likelihood of major impacts (as in most cases archaeology will already have been lost, and effects on historic character will be less significant).</p> <p>Similarly, in relation to the National Park and AONBs, because inappropriately scaled / unacceptable development will be discouraged, and because many of the most significant heritage resources are in those areas, effects are expected to be positive. An indirect negative effect may be that some sites are directed out of these areas to other parts of the Plan area.</p> <p>The emphasis on locating sites as close as possible to sources of waste and which minimise transport impacts would have some minor benefits on historic buildings as traffic can, through air pollution and noise, impact upon both the integrity and experience of a historic property.</p>
11.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy would, through making best use of the existing facility network, reduce impacts on the landscape</p>

								<p>and townscape as less land would be used and less standalone infrastructure (with associated landscape impact) would result.</p> <p>Supporting capacity at new sites may have some landscape impacts depending on the size and form of the site and constraints on and around it, however, the preference in policy W11 for land such as previously developed land, industrial sites, former quarries etc. should reduce the likelihood of major impacts (as in most cases landscape designations will be avoided through using this land, and local effects on landscape character or key viewpoints will be less significant).</p> <p>Similarly, In relation to the National Park and AONBs, because inappropriately scaled / unacceptable development will be discouraged, and because these areas are the most significant landscape designations, effects are expected to be positive. A lesser indirect negative effect may be that some sites are directed out of these areas.</p> <p>The emphasis on locating sites as close as possible to sources of waste and which minimise transport impacts would have some minor benefits on landscape character as traffic can, through noise in particular, affect character and reduce tranquillity.</p> <p>Some uncertainty is noted as other policies in the plan, including W11 and development management policies are not yet finalised.</p>
12.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Positive benefits will occur as jobs and income will be retained at existing locations and some new jobs locations associated with new sites will arise. Waste business costs may also be reduced by maximising the capacity of exiting sites. The preferred policy also provides support for a range of ways of providing waste management facilities which provides flexibility to the waste sector.</p> <p>While some waste management in the National Park and AONBs may not be realised, the policy would prevent degradation of the special qualities of designated landscapes which indirectly will help support jobs in tourism.</p>
13.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> This preferred policy would maximise use of existing sites and so would help to retain jobs in communities. It would also make waste development less likely in designated landscapes, which would indirectly protect tourism jobs in local communities.</p> <p>When considered alongside the site identification criteria in preferred policy W11 as well as the development control policies (particularly policy DO2 for 'Local Amenity and Cumulative Impacts' which would ensure community amenity impacts would be kept within acceptable levels) it would seem the potential for local negative community effects is low. Traffic impacts on community vitality would also be lessened as the policy emphasizes reduced journey length.</p>
14.	m +	m +	m +		✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy would, through making best use of the existing facility network, reduce impacts on the recreational access network as less land would be used (so less footpaths and green infrastructure would be impacted upon).</p> <p>Supporting capacity at new sites may have some recreational impacts depending on the size, form and footprint of the site and constraints on and around it, however, the preference in policy W11 for land such as previously developed land, industrial sites, former quarries etc. should reduce the likelihood of major impacts (as in most cases recreational routes or facilities will be avoided and therefore effects will be less significant).</p> <p>Similarly, in relation to the National Park and AONBs, because inappropriately scaled / unacceptable development will be discouraged, and because these areas are key recreational resources, effects are expected to be positive. An indirect effect may be that some sites are directed out of these areas to other parts of the Plan area with uncertain but minor effects.</p> <p>The emphasis on locating sites as close as possible to sources of waste and which minimise transport impacts would have some minor benefits on recreation as traffic can, through noise and increased danger in particular, affect a number of types of recreational enjoyment of a place.</p> <p>Some uncertainty is noted as other policies in the plan, including W11 and development management policies are not yet finalised.</p>
	?	?	?					

15.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> While emphasising existing sites will help to prevent new communities from experiencing health and wellbeing impacts, where new sites are needed it cannot be known what the extent of impacts will be. It may also be the case that maximising or extending sites extends or even increases existing amenity impacts on local people. The policy also supports providing waste management facilities close to sources of arisings which may in some cases have negative effects on communities in terms of effects on amenity and effects from traffic. However, W11 emphasises that <i>'in all cases sites will need to be suitable when considered against.... amenity constraints....including existing and proposed neighbouring land uses'</i>. The plan also includes policy DO2 for 'Local Amenity and Cumulative Impacts' which would ensure community amenity impacts would be kept within acceptable levels.</p> <p>There may be some minor negative effects on health and wellbeing in National Parks and AONBs as waste related traffic here may need to travel further to waste management facilities. However, this may also mean less waste management foci for traffic within the National Parks (which may have some positive local effects on wellbeing).</p> <p>In summary the policy is thought to have up to minor positive and negative effects.</p>
	+	+	+				
16.	0	0	0				<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
17.	m	m	m	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy may lead to a reduction of waste facilities in protected landscapes, which could to a degree undermine this objective (though smaller scale facilities with an identified need may still be allowed). More generally however, it sets out a pragmatic approach to ensuring a sufficient supply of waste management facilities, and encourages sites close to sources of waste. This would help underpin a changing population's needs as the Plan area continues to develop.</p>
	+	+	+				
	-	-	-				

Summary of assessment. This Policy has mostly positive effects when compared to the SA objectives. This is largely because it maximises and builds on the use of facilities that are already there (which is generally a good thing to do in sustainability terms), and also seeks to reduce the transport footprint of new facilities while linking the Policy strongly to the waste site identification principals and other policies in the Joint Plan.

Amongst the most notable sustainability effects were strong positive contributions to the 'reduce resource use' and 'minimise waste' objectives (as less building will be needed to deliver the Policy, and the Policy underpins a wider strategy in the Joint Plan to move waste up the waste hierarchy). In addition, the Policy has strong economic effects as it retains jobs and potentially reduces business costs. The Policy would also protect the special qualities of protected landscapes as well as the tourist jobs that depend on them.

Mixed positive and negative effects were recorded for a number of objectives, such as biodiversity, water, soils, historic environment and landscape objectives. While the dominant effect is positive for these objectives, minor negative effects were noted due to possible displacement of some development to locations outside of protected landscapes. Similarly a mixed assessment is recorded for a changing population objective as, while there are strong positive effects in terms of delivering a working system of waste management, there is a minor concern that waste management in designated landscapes will become more difficult in the future.

Recommendations None

Policy W11 - Waste site identification principles

The allocation of sites and determination of planning applications for new waste management facilities should be consistent with the following principles:

- 1) Siting facilities for the preparation for re-use, recycling, transfer and treatment of waste (excluding energy recovery or open composting) on previously developed land, industrial and employment land, or at existing waste management sites, giving preference to sites where it can be demonstrated that co-locational benefits would arise taking into account existing or proposed uses and economic activities nearby. Where the site or facility is proposed to deal mainly with waste arising in rural areas then use of redundant agricultural buildings or their curtilages will also be acceptable in principle and, for agricultural waste, appropriate on-farm locations;
- 2) Siting facilities for the open composting of waste on previously developed land, industrial land, existing waste management sites and, where the site or facility is proposed to deal with small scale waste arisings in rural areas, the curtilage of redundant agricultural buildings or other appropriate on-farm locations. Where development of new capacity on greenfield land is necessary then preference will be given to sites located on lower quality agricultural land. Sites for the composting of waste where the process may release bioaerosols should be located at least 250 metres from the nearest residential building.
- 3) Siting facilities involving the recovery of energy from waste, including through anaerobic digestion, on previously developed land, industrial and employment land, or at existing waste management sites, giving preference to sites where it can be demonstrated that co-locational benefits would arise taking into account existing or proposed uses and economic activities nearby, including where the energy produced can be utilised efficiently. For facilities which can produce combined heat and power, this includes giving preference to sites with the potential for heat utilisation. Where the site or facility is proposed to deal mainly with agricultural waste through anaerobic digestion including energy recovery, then use of redundant agricultural buildings or their curtilages and other appropriate on-farm locations will also be acceptable in principle;
- 4) Siting facilities to support the re-use and recycling of CD&E waste at the point of arising (for temporary facilities linked to the life of the associated construction project) and at active mineral workings where the main outputs of the process are to be sold alongside or blended with mineral produced at the site; as well as at the types of sites identified in 1) above, where these are well related to the sources of arisings and/or markets for the end product;
- 5) Siting facilities to provide additional waste water treatment capacity, including for waste water containing Naturally Occurring Radioactive Materials, at existing waste water treatment works sites as a first priority. Where this is not practicable, preference will be given to use of previously developed land or industrial and employment land. Where development of new capacity on greenfield land is necessary then preference will be given to sites located on lower quality agricultural land. Siting of facilities for management of waste water from hydrocarbons development will also be considered under the requirements of Policy M18 where relevant.
- 6) Providing any additional capacity required for landfill of waste through preferring the infill of quarry voids for mineral site reclamation purposes, giving preference to proposals where a need for infill has been identified as part of an agreed quarry reclamation scheme and where any pollution control concerns can be mitigated to an acceptable level.

In all cases sites will need to be suitable when considered in relation to physical, environmental, amenity and infrastructure constraints including existing and proposed neighbouring land uses, the capacity of transport infrastructure and any cumulative impact from previous waste disposal facilities, in line with national policy.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	-	-	-	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy shows a preference for previously developed land for most waste development. This is thought to be better than developing greenfield land, though in some cases previously developed land can be of high biodiversity value.</p> <p>Similarly, infilling quarry voids with landfill may have mixed implications for biodiversity and geo-diversity, being a necessary precursor to biodiversity friendly restoration in some instances, while in other instances it may cover geological faces or habitats that have developed on the quarry floor (for instance, a number of uncommon wildflower species can develop on thin substrates).</p> <p>However, this option also requires consideration to be given to environmental constraints (which would include biodiversity and geo-diversity) and this would be in line with national waste planning policy. Appendix B of the National Planning Policy for Waste includes a requirement to consider international and nationally designated nature conservation sites and the NPPF states that the planning system should minimise impacts on biodiversity and provide net gains where possible.</p> <p>Effects could be strengthened by making links to the biodiversity development management policy more explicit.</p>
	0	0	0					
	+	+	+					
2.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							<p>level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy requires consideration to be given to environmental constraints (which would include effects on water) in line with national waste policy. Appendix B of the National Planning Policy for Waste requires consideration to be given to effects on vulnerable surface and groundwater or aquifers. The suitability of locations that are vulnerable to flooding and the impacts that this may have on water quality from waste contamination also requires consideration through national policy.</p> <p>In addition, the policy requires 'Siting facilities to provide additional waste water treatment capacity, including for waste water containing Naturally Occurring Radioactive Materials, at existing waste water treatment works sites as a first priority', which will help ensure that impacts on receiving water bodies are contained to fewer stretches of rivers for example.</p> <p>Positive.</p>
3.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy gives preference to co-locating and siting facilities close to the point of arising, which would have positive effects in terms of minimising transport associated with new waste developments. While siting facilities for recycling CDE waste close to the point of arising will also reduce transport, there could be some negative transport effects arising from recycling at active minerals sites, though the policy does refer to this being in instances where materials may be blended for onwards sale, and also where such products could be sold alongside extracted minerals, so this, in effect would mitigate for a proportion of the effect (though we have noted a possibility of minor negative in the assessment)</p>
	-	-	-				
4.	m +	m +	m +	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred option requires consideration to be given to environmental constraints (which would include effects on air) in line with national waste policy. Appendix B of the National Planning Policy for Waste contains requirements to consider effects on air quality and would therefore have positive effects against this objective, acknowledging that some effects on</p>

							air quality may remain. This preferred policy also gives preference to co-locating and siting relevant categories of development close to the point of arising, which would have positive effects in terms of minimising transport associated with new waste developments and the resulting emissions (though this may still have localised air quality effects). The policy also protects communities from bio-aerosols. Overall positive.
5.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred option would have positive effects in relation to protecting soils and agricultural land by preferring use of previously developed land and land at industrial estates. Criteria 2 and 5 of this policy also require that where new composting or waste water treatment capacity is required at greenfield sites, preference would be given to sites located on lower quality agricultural land.</p>
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred option would have positive effects in relation to reducing the causes of climate change by requiring energy produced from EfW plants to be used efficiently and giving preference to locations where the heat can be used also. This would reduce the need for generating power from fossil fuels and the associated carbon emissions, acknowledging that some carbon emissions take place with EfW processes.</p> <p>In addition, as the option has positive effects in terms of minimising transport, lower greenhouse gas emissions from transport are expected. However, while siting facilities for recycling CDE waste close to the point of arising will also reduce transport, there could be some negative transport (and thus climate change) effects arising from recycling at active minerals sites, though the policy does refer to this being in instances where materials may be blended for onwards sale, and also where such products could be sold alongside extracted minerals, so this, in effect would mitigate for a proportion of the effect (though we have noted a possibility of minor negative in the assessment).</p>
7.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

								level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This preferred option requires consideration to be given to environmental constraints (which would include climate change and flooding) in line with national waste policy. Appendix B of the National Planning Policy for Waste states that the suitability of locations subject to flooding will need particular care whilst the NPPF directs development away from the areas at highest risk from flooding where possible and aims to ensure that new developments do not increase flood risk elsewhere. The NPPF states that <i>'new development should be planned to avoid increased vulnerability to the range of impacts arising from climate change'</i> and where new development is proposed in vulnerable areas, suitable adaptation measures should be put in place'.
8.	m +	m +	m +	✓		✓	✓	<u>Local Effects</u> Not applicable <u>Plan level / regional / wider effects</u> The preferred policy supports the use of redundant agricultural buildings (which would reduce the need for new construction materials). The policy also encourages co-locating of facilities which may minimise the resources needed as existing infrastructure/access tracks etc. can be utilised.
9.	+	+	+	✓			✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The preferred option supports the use of redundant agricultural buildings which would potentially reduce the amount of future building materials and waste from construction entering the waste streams. Co-locational opportunities may also arise through this policy e.g. by locating particular types of waste facilities alongside certain other forms of development, such as those which can use the output of the waste processes. This would put an otherwise waste product to beneficial use and minimise waste to be processed at other facilities.
10.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

								<p><u>Plan level / regional / wider effects</u> This preferred option requires consideration to be given to environmental constraints (which would include the historic environment) in line with national waste policy. Appendix B of the National Planning Policy for Waste states that potential effects on the significance of designated and undesignated heritage assets and their settings should be considered. Effects could be strengthened by making links to the historic environment development management policy more explicit.</p>
11.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred option requires consideration to be given to environmental constraints (which would include landscape) in line with national waste policy. The National Planning Policy for Waste and the NPPF both outline a number of factors relating to landscape and visual and townscape impacts that must be taken in to consideration. Emphasis is given to protected/valued landscapes, which means that areas outside of these designations may experience negative landscape effects. However development management policies in this plan require consideration of a broader range of landscape issues so would in effect ensure these are considered.</p> <p>Effects could be strengthened by making links to the landscape development management policy more explicit.</p>	
12.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would support siting waste management facilities on industrial and employment land and co-locating and would therefore have positive effects against this objective by supporting businesses through, for example, provision of materials to be reused as new products.</p>	
13.	m +	m +	m +	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>	

								<p><u>Plan level / regional / wider effects</u> This policy would support siting waste management facilities on industrial and employment land and co-locating and would therefore have positive effects against this objective by supporting other businesses which in turn would help to maintain the vitality of communities/ sustain local jobs. The preference for locations where heat can be utilised from recovery of energy from waste may also help to maintain the vitality of communities through provision of sustainable energy.</p>
14.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This preferred policy option requires consideration to be given to amenity constraints (which could include recreation although isn't specific) in line with national waste policy. The NPPF recognises the importance of recreation and leisure facilities particularly in designated landscapes and also recognises the role they can play in site reclamation. This policy is therefore considered to be positive in relation to this objective.</p>
15.	m +	m +	m +	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The preference for locations where heat can be utilised from recovery of energy from waste would have positive effects on the wellbeing of communities through provision of a local sustainable energy source. In terms of mitigating any effects on communities, this policy would require consideration of amenity issues to be undertaken in line with national waste planning policy. Appendix B of the National Planning Policy for Waste requires that noise, light pollution, vibration, vermin, odour, air quality and traffic are all taken in to consideration. Amenity issues are also given much weight in the NPPF and therefore impacts in relation to this objective are considered to be positive.</p> <p>The policy also protects communities from bio-aerosols.</p>
16.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

								level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This preferred option requires consideration to be given to environmental constraints (flooding) in line with national waste policy. Appendix B of the National Planning Policy for Waste states that the suitability of locations subject to flooding will need particular care whilst the NPPF directs development away from the areas at highest risk from flooding where possible and aims to ensure that new developments do not increase flood risk elsewhere. Overall impacts in relation to this objective are considered to be positive.
17.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This preferred option would have positive effects against this objective through the preference for locations which would enable heat to be used, which could provide energy for communities. These effects may become more positive over time as more schemes are put in place.

Summary of assessment

Effects in relation to this Policy are largely positive. The preference for locations close to where heat generated through Combined Heat and Power schemes can be utilised, would support climate change objectives as well as having a positive outcome for local communities and businesses. The principle of co-location could also have some positive impacts in terms of the economy, reducing transport miles, soils and land, and minimising resource use. Reference to national policy in relation to consideration of specific environmental and community issues, may lead to a number of positive impacts as the NPPF and National Planning Policy for Waste cover issues relating to most of the SA objectives.

Some minor or negative effects are recorded in relation to biodiversity (as habitats on previously developed land may be lost) and landscape (where less valued landscapes may endure negative effects), though development management measures would reduce these issues down to low or insignificant levels. In addition, while siting facilities for recycling CD&E waste close to the point of arising will reduce transport, there could be some negative transport effects arising from recycling at active minerals sites, though the Policy does mitigate for a proportion of the effect through its existing wording.

Recommendations

Better links to development management policies could be made in the 'key links to other relevant policies' box, particularly the landscape, biodiversity and historic environment policies.

Policy I01 - Minerals and waste transport infrastructure

- 1) The development of rail, water, pipeline or conveyor transport infrastructure, or use of existing infrastructure, will be encouraged and permitted for the transport of minerals and waste produced or arising in the Plan area, as well as for the reception of any large scale imports of minerals or waste into the area.
- 2) Where proposals for minerals or waste development would be located in close proximity to an existing wharf or rail head, they should include information to demonstrate that the potential for use of such facilities has been considered and, where practicable, should prioritise use of alternatives to road transport.

Proposals involving the development of, or use of existing, non-road transport infrastructure (other than pipelines and conveyor systems) should also be well located in relation to the main road network in order to facilitate multi-modal movements of minerals and waste and will be required to demonstrate compliance with other relevant development management policies in the Joint Plan. Where new minerals or waste transport infrastructure is proposed in the Green Belt the development should preserve openness and be consistent with the purposes of Green Belt designation.

- 3) Availability of sustainable minerals supply infrastructure is supported through a site allocation for the rail reception, handling and onward distribution of aggregate at:

Land at Barlby Road, Selby (MJP09)

Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in Appendix 1.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	-	-	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	?					

							<p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The continued use of existing infrastructure in the short term is not likely to have significant effects on biodiversity (as it continues current trends).</p> <p>In the longer term, the effects are uncertain as the impacts may become more negative depending on the location and requirements for additional/new infrastructure. The severity of these impacts would be determined by location and type of infrastructure development. In particular, the construction phases of development may incur habitat loss, and the on-going use of development may cause disturbance to biodiversity. Any new transport infrastructure proposed would be required to comply with relevant development management policies in the Plan including the policy regarding biodiversity/geo-diversity.</p>
2.	0	0	0	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> In the short term there is likely to be a continuation of existing trends in transportation through the retention of existing infrastructure. Where it is identified that waste and minerals could be exported using waterways in the future, there is the potential for water quality to be negatively impacted in the longer term such as through waterside development and its associated run-off. These effects however are uncertain and predominantly localised to the Selby area which has infrastructure that is potentially suitable for this method of transportation.</p>
	?	?	?				
3.	+	m+	m+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

	?	?	?						<p>with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u></p> <p>This option encourages the use of existing (non-road) transport infrastructure as well as the development of new (non-road) infrastructure for the transportation of minerals and waste. This should have a positive impact on helping reduce road transportation and mileage, including its associated emissions.</p> <p>However, the magnitude of impact that this policy will largely be dependent upon whether there is the potential to implement alternatives to road transport in particular locations (so some uncertainty is noted and the score has been moderated to reflect what is perceived as limited potential). The net effect is considered to be moderately positive in relation to this objective.</p>
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4.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> It is likely that this policy would have a positive impact on air quality through the retention of existing, and support for new (non-road), infrastructure, which would reduce transportation by road. The significance of this may increase over time should there be a positive shift towards using these more sustainable modes of transportation.</p> <p>However, the development of new non-road infrastructure may have temporary and localised air quality impacts, for example through dust generated during construction. Though considering other development management policies this is likely to be a relatively insignificant effect. The overall effect in relation to this objective is broadly positive.</p>
5.	0	0	0	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> There are likely to be neutral effects from retaining existing infrastructure. However, the development of any new infrastructure is likely to involve some additional land footprint and the level of impact would be dependent upon location and the characteristics of the land chosen for that new infrastructure. It is likely that any effects on land lost to development would be cumulative (i.e. more additional land would be lost over time).</p>

6.	+	m +	m +	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> Retaining and supporting the development of additional non-road infrastructure should help to reduce road transportation which would have a positive impact on reducing greenhouse gas emissions, particularly in the long term. The magnitude of effect that this policy will have however, will be dependent upon the location of future mineral and waste sites and whether they have the potential to connect to suitable transport infrastructure in order to reduce road transportation and associated carbon emissions (uncertain). The effect, however, is broadly positive.</p>
7.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>
8.	+	+ -	+ -	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							<p>with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> This option would have a positive impact in retaining and supporting infrastructure that would allow for sustainable minerals and waste development and materials movement. It would also reduce the use of fuel. There are however implications on the use of resources to construct new infrastructure to support rail, water, pipeline or conveyor transport.</p>
9.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
10.	?	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The effects on heritage assets and their setting is likely to be a consideration for the development of new infrastructure. The severity of any impacts will be dependent upon the type of infrastructure and its location however proposals that involve the development of new, or use of existing, non-road infrastructure will be required to demonstrate compliance with other relevant development management policies in the Plan, including the Historic Environment policy. Impacts in relation to this objective are considered uncertain but minor negative at worst.</p>

11.	?	-	-	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The effect on landscape/townscape is likely to be a consideration for the development of new infrastructure. The severity of any impacts will be dependent upon the type of infrastructure and its location however proposals that involve the development of new, or use of existing, non-road infrastructure will be required to demonstrate compliance with other relevant development management policies in the Plan, including the Landscape policy. The policy also includes wording to protect the purposes of Green Belt. Impacts in relation to this objective are considered uncertain to minor negative at worst.</p>
12.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> Retaining existing infrastructure whilst also encouraging new non-road infrastructure will help to support the mineral and waste industries to access markets and the sustainable movement of goods. It will also contribute towards the development of a low carbon economy. The requirements of the policy could, however, impose some additional costs on minerals / waste developers⁶⁵. Overall minor positive and minor negative impacts may result in relation to this objective.</p>
13.	?	?	?	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The development of new infrastructure may have a potential impact on the viability and vitality of local communities however effects will be dependent upon the location and type of infrastructure proposed. Impacts are therefore uncertain at present.</p>
14.	-	-	-	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	+	+	+					

⁶⁵ The actual costs of shipping by rail or road vary depending on how total costs are calculated, though key decision making criteria about modal choice usually include cost and time. However, according to a study by the European Parliament while a range of factors affect the modal choices made by companies involved in shipping, ‘for all distances below some 200km, road transport is markedly superior to rail transport in terms of cost and feasibility’ but also notes ‘over longer distances, rail becomes competitive because its cost advantage increases and its time disadvantage decreases relative to road’ (European Parliament, 2015. Freight on Road: Why EU Shippers Prefer Truck to Train (URL: [http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540338/IPOL_STU\(2015\)540338_EN.pdf](http://www.europarl.europa.eu/RegData/etudes/STUD/2015/540338/IPOL_STU(2015)540338_EN.pdf)]

							<p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The development of new non-road infrastructure may have a mixture of positive (for instance there may be less conflict between road users and negative (possible visual intrusion and noise) impacts on recreation and leisure, depending upon the location of the development. The development of water transport infrastructure may have an impact upon recreational users of waterways (e.g. through disturbance to tranquillity) but this is not expected to be at a significant level.</p>
15.	+	m	m	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing infrastructure is not likely to cause further impacts unless the frequency of use increases, which is a possibility, though new infrastructure could have local effects. Direct impacts could relate to noise, odour and dust through waste and mineral transportation, however, impacts are likely to be controlled by the development management policies to a degree (e.g. 'Local Amenity and Cumulative Impacts').</p> <p>By helping to reduce road transportation, however, positive effects could result in relation to this objective by removing HGVs from roads thereby impacting on safety, noise and vibration as well as reducing the potential for odour and dust from transportation. On balance the localised effects of supporting existing and new infrastructure are considered less significant than the benefits of reducing road transportation of minerals and waste.</p>
16.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	?	?	?				

								<p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> The development of new infrastructure would need to take account of flood risk to ensure that it would not directly or indirectly affect this objective. However, it is expected that development to enable transportation by water is likely to fall within the Government's definition of water compatible, though will still be required to not increase the chances of flooding elsewhere. In summary while effects are expected to be minimal considering the development management policies in the plan, there remains some uncertainty with this policy that can only be resolved at a site specific level of detail'.</p>
17.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p>However, the policy is supported by site MJP09 (scored separately in separate sites appendix). Proposals for development of this site will be required to take account of the key sensitivities and incorporate the necessary mitigation measures that are set out in the Plan.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>

Summary of assessment

This Policy is likely to have some positive impacts through the retention of the existing rail, pipeline and water transportation infrastructure and support for the development of new infrastructure. These positive effects relate to reducing the need to transport minerals and waste by road with knock on benefits in relation to air quality, climate change, amenity and the economy. Impacts are uncertain in relation to a number of the environmental objectives such as biodiversity, water quality, landscape and cultural heritage as impacts will be dependent upon the location, type and scale of additional infrastructure as well as the frequency of its use. Small scale negative impacts may occur as a result of construction on new transport links such as loss of habitats, impacts upon the setting of historic assets or loss of archaeology and landscape impacts.

Recommendations

None noted.

Policy I02 - Locations for ancillary minerals infrastructure

- 1) Development of ancillary minerals infrastructure at active minerals extraction sites and sites producing secondary aggregate will be permitted provided the following criteria are met:
 - i) The ancillary development produces a 'value added' or complementary product based mainly on the mineral extracted or secondary aggregate produced on the host site; and
 - ii) The development would not have significant additional adverse impact on local communities, businesses or the environment; and
 - iii) The development would not unacceptably increase the overall amount of road transport to or from the host site; and
 - iv) Where the host site is located in the Green Belt the ancillary development is acceptable in accordance with national and local Green Belt policy; and
 - v) The development is linked to the overall life of minerals extraction or supply of secondary aggregate at the host site, unless the location is appropriate to its retention in the longer term.
- 2) Within the City of York area, development of ancillary minerals infrastructure will also be permitted provided the following criteria are met:
 - i) The site would be located on industrial or employment land, previously developed land, or would be co-located with other compatible industrial or commercial development; and
 - ii) The site has good access to the transport network; and
 - iii) The development would not have significant adverse impact on local communities, businesses or the environment including heritage assets.
- 3) The siting of ancillary minerals infrastructure within the North York Moors National Park will only be supported where it would be located within the Boulby mine surface site or Doves Nest Farm mine surface site if developed, or within the Whitby Business Park identified on the Policies Map.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Ancillary infrastructure will be located on (or at least adjacent to) extant sites which will still be operational – so a combined effect may occur if any sensitive habitat / geology receptors are nearby. However, the policy provides protection through not creating significant additional adverse impacts on the environment. In addition, siting on previously developed land in York or in the Whitby Business Park will further minimise effects.</p> <p>Overall, the effect very much depends on location, but any negative effects are expected to be further mitigated by development management policies.</p>
2.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Ancillary infrastructure will be located on (or at least adjacent to) extant sites which will still be operational – so a combined effect may occur if any sensitive water receptors are nearby. However, the policy provides protection through not creating significant additional adverse impacts on the environment.</p> <p>Overall, the effect very much depends on location, but any negative effects are expected to be further mitigated by development management policies. Given that secondary aggregate processing may have significant water impacts policy DO9 (water) should be referred to in the key links to other relevant policies and objectives.</p>
3.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

								with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy does not unacceptably increase the amount of road traffic so effects would be reduced, particularly when considered with development management policies. However, it is possible that some sites may already experience significant traffic so any additional impact could be significant. If the policy is fully implemented the effect should be positive, though some uncertainty is recorded as significance thresholds may vary depending on the methodology used by transport assessments.
4.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As the policy supports development that 'does not create significant additional adverse impact on local communities, businesses or the environment', and does not unacceptably increase traffic impacts the effect of the policy on the objective is positive. In addition the amenity and cumulative effects development management policy is a linked policy, which should further strengthen the protection offered by this policy.
5.	0	0	0	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Generally development encouraged by this policy will be on existing sites or adjacent to them, or on previously developed land in York. Some very minor negative or positive effects may occur, dependent on location.
	-	-	-					
	+	+	+					
6.	0	0	0					<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Not allowing a significant increase in traffic is unlikely to significantly increase greenhouse gas emissions.
7.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link

8.	0	0	0		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Ancillary infrastructure to support secondary aggregates is likely to indirectly support this objective (with indirect benefits for minimising resource use). For other minerals the effect is neutral.
	+	+	+					
9.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
10.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The impact of locating ancillary mineral infrastructure on extraction sites may have an impact on the character and setting of historic or heritage assets. However, the policy protects against significant environmental effects, specifically references heritage assets in York and confines development to the Whitby Business Park in the North York Moors.
11.	+	+	+	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The impact on the landscape would be different in each location and would need to be assessed on an individual basis. However, the policy protects against significant additional environmental effects, so landscape should also be protected. In addition, siting on previously developed land in York or in the Whitby Business Park will further minimise effects on landscape or townscape. The openness of the Green Belt would also be preserved. However, some effects will be inevitable as this policy would introduce built infrastructure which may have a disturbance / urbanising effect.
	-	-	-					
12.	+	+	+	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+					
	-	-	-					

								<u>Plan level / regional / wider effects</u> This policy would add value to minerals with economic benefits, though it may be difficult to avoid significant effects in some locations, which may make some development more difficult to deliver.
13.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					<u>Plan level / regional / wider effects</u> The policy requires that development does not create significant additional adverse impact on local communities. This is broadly positive, though in some places low level impacts acting together (e.g. traffic, noise, visual impacts) might alter local perceptions of an area.
14.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> The requirement that ancillary infrastructure be confined to the Whitby Business Park is positive for this objective. Elsewhere minor impacts might be expected, mitigated by the policy's avoidance of significant environmental effects and the link to development management policy D02.
15.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	-	-	-					<u>Plan level / regional / wider effects</u> The policy requires that development does not create significant additional adverse impact on local communities. This is broadly positive for the health and wellbeing of communities, though in some places low level impacts acting together (e.g. traffic, noise, visual impacts) might alter local perceptions of an area with effects on wellbeing. The link to development management policy D02 will help to mitigate impacts (e.g. from air and noise).
16.	0	0	0					<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> The impact of the policy on flooding is dependent on location, but expected to be mitigated by links to the development management policies and the reference to avoiding significant environmental effects.

17.	0	0	0					<u>Local Effects</u> No clear link
								<u>Plan level / regional / wider effects</u> No clear link.

Summary of assessment In the main the protections in this Policy will avoid significant effects on the environmental objectives, though uncertainty is occasionally noted due to uncertainty over locations where minerals ancillary infrastructure would take place and how 'additional significant environmental effects' may be interpreted by different developers, particularly if the host site already has significant impacts.

Elsewhere, mixed effects are often reported. For instance, the economic objective notes how this Policy helps to add value to minerals products, but also the potentially restrictive nature of the Policy which may make some development more difficult to achieve could be negative. The community vitality and health and wellbeing objectives note that synergies (i.e. where different impacts work together) between different impacts, such as traffic, noise and visual impacts may together result in minor significant effects on perceptions of an area or on wellbeing.

Recommendations Given that secondary aggregate (by-products of other mineral extraction or industrial processes) processing may have significant water impacts, Policy D09 should be referred to in the key links to other relevant policies and objectives. In addition, to address synergies between effects, Policy D02's reference to cumulative effects could be clarified in that Policy's supporting text so that it includes synergies between different types of effect.

Policy S01 - Safeguarding mineral resources

Part 1) - Surface mineral resources:

The following surface minerals resources and associated buffer zones identified on the Policies Map will be safeguarded from other forms of surface development to protect the resource for the future :

- i) All crushed rock and silica sand resources with an additional 500m buffer;
- ii) All sand and gravel, clay and shallow coal resources with an additional 250m buffer;
- iii) Building stone resources and active and former building stone quarries with an additional 250m buffer.

Part 2) - Deep mineral resources:

Potash and polyhalite resources within the Boulby Mine licensed area and Doves Nest Farm indicated and inferred resource area, identified on the Policies Map, will be safeguarded from other forms of surface development to protect the resource for the future.

Reserves and resources of potash and polyhalite identified on the Policies Map, including a 2km buffer zone, will also be protected from sterilisation by other forms of underground minerals extraction, deep drilling and the underground storage of gas or carbon in order to protect the resource for the future.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	?					

							<p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the Plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, as the consequences of this displacement is not known. However, there could be some positive benefits from not developing the area which is safeguarded.</p>
2.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, as the consequences of this displacement is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
	?	?	?				
3.	0	0	0	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, as the consequences of this displacement, is not known.</p>
	?	?	?				
4.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

	?	?	?					<p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan. However, the inclusion of safeguarded buffer zones within this policy will indirectly help to ensure that air quality impacts on users of new development are minimised, should mineral development take place in the future.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
5.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding keeps open the option of developing the optimum locations for mineral extraction. This may help minimise land take when compared to extraction from a sub optimal location (which may require more land take).</p> <p>In the case of building stone, safeguarding active and former building stone quarries may steer further building stone quarrying away from new sites and towards the extant sites safeguarded by the policy (positive). Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
6.	0	0	0	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>

7.	0 ?	0 ?	0 ?	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> Safeguarding mineral resources would enable the option of future extraction and thus strongly contribute to the safeguarding and efficient use of minerals sub objective.</p>
9.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan.</p>
10.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan. In relation to the safeguarding of</p>
	?	?	?				

								<p>building stone, this policy would ensure that a sufficient range and quantity of building stone for the repair of historic buildings is safeguarded for future use. This would have a major positive impact in relation to the historic environment.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
11.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted direct effect. Were development to take place it would need to accord with other policies in the plan. In relation to the safeguarding of building stone, this policy would ensure that a sufficient range and quantity of building stone for the repair/construction of buildings in a manner that is sensitive to the surrounding landscape/townscape is safeguarded for future use. This would have a minor positive impact in relation to landscape (as vernacular buildings are an important component of landscape character).</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
	?	?	?					
12.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	+	+	+					
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> Safeguarding mineral resources will keep open the future option of extraction as this policy will prevent sterilisation of the resource. This potentially retains a future economic opportunity. With regard to protecting deep mineral resources, safeguarding polyhalite/potash over other forms of potentially conflicting underground minerals extraction is also considered to have a highly positive economic impact as this is likely to be the scarcest and most economically significant resource.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. (e.g. potential for displacement of non-minerals economic activity within the safeguarded area).</p>
13.	0	0	0	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
14.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known. On the other hand, there could be some positive benefits from not developing the area which is safeguarded.</p>
	?	?	?					

15.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy, users of new developments would be well protected from potential future minerals extraction through the inclusion of buffer zones of varying distance.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
16.	0	0	0	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As safeguarding does not infer that any mineral development will take place there is no predicted effect. Were development to take place it would need to accord with other policies in the plan.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
17.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	?	?	?					

								<p><u>Plan level / regional / wider effects</u></p> <p>This policy would have a positive effect in terms of ensuring that minerals are available to support the needs of the population. Safeguarding the potash/polyhalite resource is particularly significant as this is the only area of the country that the potash resource exists and the resource is of national significance.</p> <p>Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
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Summary of assessment As safeguarding does not infer that minerals extraction will take place there are generally no predicted direct effects. Were development to take place it would need to accord with other policies in the Joint Plan.

This Policy is likely to result in minor to very positive impacts in relation to encouraging the safeguarding of resources, economic growth and meeting the needs of a changing population as future mineral resource sterilisation is avoided, thus conserving resources for future benefit. The safeguarding of buffer zones around mineral reserves may also have minor positive impacts in relation to minimising air quality and amenity impacts experienced by users of new proximal / nearby development.

Some uncertainty is noted in relation to the amount and location of any future development that may be displaced as a result of this Policy, and the consequences of this displacement, is not known. However, some objectives noted that there could be some positive benefits from not developing the area which is safeguarded.

Recommendations None

Policy S02 - Developments proposed within Minerals Safeguarding Areas

Part 1) - Surface mineral resources:

Within Surface Minerals Safeguarding Areas shown on the Policies Map, permission for development other than minerals extraction will be granted where:

- i) It would not sterilise the mineral or prejudice future extraction; or
- ii) The mineral will be extracted prior to the development (where this can be achieved without unacceptable impact on the environment or local communities), or
- iii) The need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral; or
- iv) It can be demonstrated that the mineral in the location concerned is no longer of any potential value as it does not represent an economically viable and therefore exploitable resource; or
- v) The non-mineral development is of a temporary nature that does not inhibit extraction within the timescale that the mineral is likely to be needed; or
- vi) It constitutes 'exempt' development (as defined in the Safeguarding Exemption Criteria list).

Applications for development other than mineral extraction in Minerals Safeguarding Areas should include an assessment of the effect of the proposed development on the mineral resource beneath or adjacent to the site of the proposed development.

Part 2) - Deep minerals resources:

In areas identified as Underground Mineral Safeguarding Areas on the Policies Map, proposals for the following types of development should be accompanied by information about the effect of the proposed development on the potential future extraction of the safeguarded underground resource, as well as on the potential for the proposed surface development to be impacted by subsidence arising from working of the underlying minerals resource:

- Large institutional and public buildings;
- Major industrial buildings including those with sensitive processes and precision equipment vulnerable to ground movement;
- Major retail complexes;
- Non-residential high rise buildings (3 storeys plus);
- Strategic gas, oil, naphtha and petrol pipelines;
- Vulnerable parts of main highways and motorway networks (e.g. viaducts, large bridges, service stations and interchanges);
- Security sensitive structures;
- Strategic water pumping stations, waterworks, reservoirs, sewage works and pumping stations;
- Ecclesiastical property;
- Power stations; and
- Wind turbines

Permission will be granted where the assessment demonstrates that a significant risk of adverse impact on the development from mining subsidence will not arise or that the criteria in Part 1) of the policy (other than the final criterion) are met.

Part 3) – Protecting potash and polyhalite resources from other underground minerals development:

Where proposals for deep drilling or development of underground gas resources or the underground storage of gas or carbon are located within the area safeguarded for potash, salt and polyhalite shown on the Policies Map, permission for development will only be granted where it can be demonstrated that the proposed development will not adversely affect the potential future extraction of the protected mineral.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be benefits for biodiversity / geodiversity where there are circumstances in which the safeguarding policy precludes development from going ahead. Though to some extent some of this development would simply go somewhere else which may be better or worse for this objective (uncertain effect).</p>
	?	?	?					
2.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be benefits for water quality where there are circumstances in which the safeguarding policy precludes development from going ahead. Though to some extent some of this development would simply go somewhere else.</p>
	?	?	?					
3.	0	0	0					<p><u>Local Effects</u> No clear link.</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
4.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> There could be benefits for air quality where there are circumstances in which the safeguarding policy precludes development from going ahead. Though to some extent some of this development would simply go somewhere else.</p>
5.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be benefits for agricultural land where there are circumstances in which the safeguarding policy precludes development from going ahead (much of the land in the relevant safeguarding areas is high quality land). Though to some extent some of this development would simply go somewhere else (which may be better or worse for this objective). In addition, for deep minerals resources the potential for development to be subject to subsidence is considered by the policy, which is positive.</p>
	?	?	?					
6.	0	0	0					<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
7.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding potash areas will help preserve a key resource for fertiliser production. This will indirectly contribute to food security, which is a key vulnerability in a changing climate.</p>
8.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy contains criteria to ensure that consideration is given to safeguarding surface, deep and potash, salt and polyhalite mineral resources (so resources will be protected) although it does not prioritise safeguarding above all other considerations and there may be some instances where the mineral is sterilised. This will help safeguard resources.</p>
	+	+	+					

9.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
10.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> There could be benefits for the historic environment where there are circumstances in which the safeguarding policy precludes certain development from going ahead (e.g. in the National Park). Though to some extent some of this development would simply go somewhere else.
	?	?	?					
11.	+	+	+	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> There could be benefits for landscape where there are circumstances in which the safeguarding policy precludes certain development from going ahead (e.g. in the National Park). Though to some extent some of this development would simply go somewhere else.
	?	?	?					
12.	-	-	-		✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The option may prevent some developments from going ahead which may have a negative effect on the economy, though to some extent this is mitigated by the policy's criteria that 'the need for the non-mineral development can be demonstrated to outweigh the need to safeguard the mineral'. In the longer term, the safeguarded minerals themselves may be extracted with economic benefits.
			+					

13.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option may prevent some developments from going ahead which may have a negative effect on the economy and therefore job creation. It may also have negative effects in terms of precluding developments which help to support the vitality and viability of a community such as housing (though the policy exemptions do allow infill development in town and villages).</p>
14.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be benefits for recreation assets where there are circumstances in which the safeguarding policy precludes development from going ahead. Though to some extent some of this development would simply go somewhere else.</p>
	?	?	?				
15.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be benefits for community health where there are circumstances in which the safeguarding policy precludes development from going ahead. Though to some extent some of this development would simply go somewhere else.</p>
	?	?	?				
16.	0	0	0				<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
17.	-	-	-	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option may have negative effects by precluding development to help support the population, such as some housing projects (though the exceptions list does allow a number of residential development types such as infilling in towns and villages). However it may have positive effects by ensuring that there is an available supply of minerals for development.</p>
	+	+	+				

Summary of assessment In terms of the environmental sustainability objectives there are minor benefits from this Policy, as arguably it would potentially reduce the amount of development in safeguarding areas, though to some extent some of this development would simply go somewhere else (with uncertain impacts). The assessment also identified strong benefits for the minimising resource use objective as safeguarding a broad range of minerals resources would help protect resources for possible future use. Similarly, an additional benefit was noted for climate adaptation as safeguarding potash and polyhalite will help save a key resource for manufacturing fertiliser, which ultimately will help tackle the issue of food security (which is a recognised climate change vulnerability).

There were however some minor negative effects noted in relation to the economy, community vitality and changing population objectives. This is because some economically valuable development may be deterred from taking place (though the Policy does contain a criteria which considers the need for the development and whether this outweighs the need to safeguard the mineral), while some housing projects may also be less viable (though there are exemptions which help moderate this). The economy objective also records a long term benefit arising from having greater access to minerals for extraction.

Recommendations No mitigation is suggested.

Policy S03 - Waste management facility safeguarding

Waste management sites identified on the Policies Map, with a 250m buffer zone, will be safeguarded against development which would prevent or frustrate the use of the site for waste development, unless:

- i) The need for the alternative development outweighs the benefits of retaining the site; and
- ii) Where the site is in active use for waste management purposes, a suitable alternative location can be provided for the displaced infrastructure; or
- iii) The site is not in use and there is no reasonable prospect of it being used for waste management in the foreseeable future.

Where development, other than exempt development as defined in the Safeguarding Exemption Criteria list, is proposed within an identified buffer zone permission will be granted where adequate mitigation can, if necessary, be provided to reduce any impacts from the existing or proposed adjacent waste uses to an acceptable level, and the benefits of the proposed use outweigh any safeguarding considerations.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	?	?	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on biodiversity and geodiversity as where sites are safeguarded alternative locations for development (i.e. non minerals and waste development) may need to be found. Whilst this may lead to an indirect effect (positive or negative) on biodiversity and geodiversity it is not possible to identify this without knowledge of the nature and location of the developments displaced. On the other hand, there could be some positive benefits from not developing the area which is safeguarded (and some safeguarded sites and buffers do contain biodiversity interest) and from reducing the need for new waste sites.
	m	m	m					
	+	+	+					
	-	-	-					
2.	?	?	?	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+					
	-	-	-					

								<p><u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on water quality and supply as where sites are safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an indirect effect (positive or negative) on water quality and supply it is not possible to identify this without knowledge of the nature and location of the developments displaced. On the other hand, there could be some positive benefits from not developing the area which is safeguarded and from reducing the need for new waste sites.</p>
3.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding strategically important waste management sites may have positive effects in relation to transport as alternative (new) minerals and waste sites may be less well served by transport routes (a review of the policies map suggests that many safeguarded sites are in relatively beneficial locations) .</p>
4.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on air quality as where sites are safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an effect (positive or negative) on air quality it is not possible to identify this without knowledge of the nature and location of the developments involved. On the other hand, there could be some positive benefits from not developing the area which is safeguarded and from reducing the need for new waste sites.</p>
	m	m	m					
	+	+	+					
	-	-	-					
5.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on loss of soils and agricultural land as where sites are</p>
	m	m	m					
	+	+	+					
	-	-	-					

								safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an effect (positive or negative) on soils and agricultural land it is not possible to identify this without knowledge of the nature and location of the developments involved. On the other hand, there could be some positive benefits from not developing the area which is safeguarded and from reducing the need for new waste sites..
6.	m +	m +	m +	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> Safeguarding strategically important waste management sites may have positive effects in relation to greenhouse gas emissions related to transport as alternative minerals and waste sites may be less well served by transport routes. Developing new sites may also require additional materials, with associated carbon footprints, or additional land that may otherwise have been a carbon sink.</p>
7.	0	0	0					<p><u>Local Effects</u> There is not a clear link between this policy and climate change adaptation.</p> <p><u>Plan level / regional / wider effects</u> There is not a clear link between this policy and climate change adaptation.</p>
8.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> Safeguarding these facilities represents a sustainable use of resources as, assuming they are required throughout the Plan period, should they be lost to other development alternative waste management facilities would be required elsewhere which would require the use of resources. This policy would effectively safeguard existing facilities therefore resulting in a positive impact in relation to this objective.</p>
9.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> This policy would lead to some positive impacts in relation to this objective where sites that manage or are able to manage waste high up the waste hierarchy are safeguarded. This policy would also safeguard sites that manage waste lower down the waste hierarchy including landfill and incineration facilities. Impacts would therefore range from major positive to moderate negative depending on the type of waste site that is being safeguarded.</p>
	m -	m -	m -					

10.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on the historic environment as where sites are safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an effect (positive or negative) for the historic environment it is not possible to identify this without knowledge of the nature and location of the developments involved. On the other hand, there could be some positive benefits from not developing the area which is safeguarded and from reducing the need for new sites.</p>
	m +	m +	m +					
	-	-	-					
11.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on landscape as where sites are safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an effect (positive or negative) for landscape it is not possible to identify this without knowledge of the nature and location of the developments involved. On the other hand, there could be some positive benefits from not developing the area which is safeguarded and from reducing the need for new sites.</p>
	m +	m +	m +					
	-	-	-					
12.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p> <p><u>Plan level / regional / wider effects</u> Whilst this option may have positive effects in terms of supporting employment at existing waste management sites (where they are active), it may have negative effects for employment in other sectors which would wish to make use of these sites. However, it is not possible to ascertain these effects without knowledge of potential other uses.</p>
	+	+	+					
	-	-	-					
13.	?	?	?	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution</p>
	+	+	+					

	-	-	-					<u>Plan level / regional / wider effects</u> Safeguarding strategic sites may have a positive effect on the vitality of communities which would otherwise be negatively affected by new development (which could displace extant development). Conversely the effect may just as likely be positive.
14.	?	?	?	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> It is considered this option would have uncertain effects on recreation and leisure as where sites are safeguarded alternative development may need to be located elsewhere. Whilst this may lead to an effect (positive or negative) on recreation and leisure it is not possible to identify this without knowledge of the nature and location of the displaced developments involved. On the other hand, there could be some positive benefits from not developing the area / buffer which is safeguarded.
15.	?	?	?	✓		✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Safeguarding strategic sites may have a positive or negative effect on the health, safety and wellbeing of communities as it may displace some alternative development that may be better or worse for wellbeing. This policy also requires that should new development be required within the 100m buffer zone of a waste facility, adequate mitigation can, if necessary, be provided within the encroaching development proposals in order to reduce any impacts from existing or proposed adjacent waste uses to an acceptable level. This should serve to protect the amenity of residents/users of new development in close proximity to safeguarded waste facilities.
16.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> No clear link.

17.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy enables strategic waste management facilities to be maintained, thus supporting the waste management needs of the population.</p>
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Summary of assessment It is not possible to accurately identify effects against a number of environmental sustainability objectives as often the main sustainability effect arises as a result of a safeguarded site and its buffer displacing another type of development to an alternative location (which may be positive or negative for the SA objectives). On the other hand, there could be some positive benefits from not developing the area, including the buffer, which is safeguarded, and safeguarding sites also benefits a number of objectives because it simply reduces the need to develop wholly new sites.

This policy may also however provide positive effects in relation to a number of objectives including minimising the use of resources, managing waste as high up the waste hierarchy as practicable and meeting the needs of a changing population. Minor negative impacts may arise as the policy could also result in facilities that manage waste lower down the waste hierarchy (e.g. landfill and incineration facilities) being safeguarded.

Recommendations None

Policy S04 - Transport infrastructure safeguarding

Railheads, rail links and wharves identified on the Policies Map, with a 100m buffer zone, will be safeguarded against development which would prevent or frustrate the use of the infrastructure for minerals or waste transport purposes, unless:

- i) The need for the alternative development outweighs the benefits of retaining the facility; and
- ii) Where the minerals or waste transport infrastructure is in active use on the land, a suitable alternative location can be provided for the displaced infrastructure; or
- iii) The infrastructure is not in use and there is no reasonable prospect of it being used for minerals or waste transport in the foreseeable future.

Where development, other than exempt development as defined in the Safeguarding Exemption Criteria list, is proposed within an identified buffer zone permission will be granted where adequate mitigation can, if necessary, be provided to reduce any impacts from the existing or proposed adjacent minerals or waste transport infrastructure uses to an acceptable level, and the benefits of the proposed use outweigh any safeguarding considerations.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail head/links and wharves are not likely to have a significant impact over and above the current baseline. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					

2.	?	?	?				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There is unlikely to be a change from the current baseline situation through the retention of existing railheads and rail links. However, water quality may be impacted by the continued use of wharves although this may be location specific to where they are in use. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
3.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The principle of safeguarding is positive in encouraging more sustainable forms of transportation of minerals. This policy allows for all existing routes/railheads with the potential for minerals and waste transport to be retained, reserving future possibilities for movement of minerals. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
4.	?	?	?	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Positive impacts on air quality would be experienced as this policy would help maximise the transportation of minerals or waste by rail/water, which would replace road transportation. This policy would reserve the existing infrastructure network but is reliant upon the location of extraction. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p> <p>The 100m buffer may also prevent dust effects on encroaching development, which is positive.</p>
5.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<u>Plan level / regional / wider effects</u> The retention of existing wharves and rail heads/links would mean that any future extraction in these locations may not require additional land for transportation. Additionally, where transport infrastructure sites are not in use and are unlikely to have potential now or in the future, or a better alternative use is identified, this policy allows consideration of those alternative uses. This would allow land to be used efficiently and may reduce the amount of derelict land in the Plan area thus positively contributing towards the achievement of this objective. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.
6.	m +	m +	m +	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The principle of retention is positive in encouraging more sustainable forms of transportation of minerals or waste by safeguarding existing facilities. This policy allows for all existing routes/railheads to be retained reserving a wide range of possibilities for movement of minerals / waste and providing alternatives to road transportation. However, it is likely that some of these facilities have more potential than others in contributing to minerals / waste transport, so a moderate positive impact on climate change which may become more positive over time is predicted. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.
	?	?	?				
7.	0	0	0				<u>Local Effects</u> There is not a clear link between this policy and this objective. <u>Plan level / regional / wider effects</u> There is not a clear link between this policy and this objective.
8.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would be positive in retaining and supporting infrastructure that would allow for sustainable minerals and waste development and their movement. Where existing transport infrastructure can be utilised this will reduce the use of resources for the construction of new infrastructure.
9.	0	0	0				<u>Local Effects</u> There is not a clear link between this policy and this objective. <u>Plan level / regional / wider effects</u> There is not a clear link between this policy and this objective.

10.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail head/links and wharves are not likely to have a significant impact over and above the current baseline in the short-term. This policy would not safeguard sites that are not in use and have no reasonable prospect of being in use in the future so would prevent derelict sites from being safeguarded and potentially impacting upon the setting of historic assets. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
11.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Similarly to objective 10, existing rail head/links and wharves are an existing feature in the landscape and their retention is not likely to have significant effects in the short term. This policy would not safeguard sites that are not in use and have no reasonable prospect of being in use in the future and this would prevent derelict sites from being safeguarded (which would result in negative landscape impacts). Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
12.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Retaining rail heads/links and wharves would be positive in ensuring that the sites connected to these have potential to remain connected in terms of access and movement of minerals and waste in the future. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					
13.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail heads/links and wharves is unlikely to change the current baseline. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?					

14.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail heads/links and wharves is unlikely to change the current baseline. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?				
15.	0	0	+				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail heads/links and wharves is unlikely to change the current baseline, though the policy will have a positive effect in the longer term through preventing encroaching development. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?				
16.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The retention of existing rail heads/links and wharves is unlikely to change the current baseline. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known, though presumably it would need a flood risk assessment, so the overall effect is neutral.</p>
17.	0	0	0				<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding of existing railheads/links and wharves is unlikely to have any significant impact on the current baseline. The policy allows some flexibility for alternative development to go ahead where the need for the alternative development outweighs the need to retain the facility and it is therefore not considered that this policy would significantly hinder development that would meet the needs of the population. Some uncertainty is noted as the nature and location of any future development that may be displaced as a result of this policy, and the consequences of this displacement, is not known.</p>
	?	?	?				

Summary of assessment This Policy would ensure that wharves and railheads/rail links are safeguarded for the transportation of minerals and waste but retains an element of flexibility to ensure that unused sites with little potential for future use or sites that would have greater benefit being used for an alternative purpose are not safeguarded. Positive impacts have been identified in relation to encouraging the use of more sustainable modes of transport, air quality, land use, climate change, resource use and the economy. There is an element of uncertainty throughout the assessment as safeguarding may displace other forms of development that may otherwise have taken place in an area and the consequences of this displacement is not known.

Recommendations No mitigation is proposed.

Policy S05 - Minerals ancillary infrastructure safeguarding

Minerals ancillary infrastructure sites identified on the Policies Map, with a 100m buffer zone, will be safeguarded against development which would prevent or frustrate the use of the site for minerals ancillary infrastructure purposes, unless:

- i) The need for the alternative development outweighs the benefits of retaining the site; and
- ii) Where minerals ancillary infrastructure is in active use on the land, a suitable alternative location can be provided for the displaced infrastructure; or
- iii) The site is not in use and there is no reasonable prospect of it being used for minerals ancillary infrastructure in the foreseeable future.

Where development, other than exempt development as defined in the Safeguarding Exemption Criteria list, is proposed within an identified buffer zone permission will be granted where adequate mitigation can, if necessary, be provided to reduce any impacts from the existing or proposed adjacent minerals ancillary infrastructure uses to an acceptable level, and the benefits of the proposed use outweigh any safeguarding considerations.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could, however, either not occur (positive as land (that may well support habitats) would not be used up) or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective (uncertain). This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
	?	?	?					
2.	+	+	+		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

	?	?	?					<p>with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could, however, either not occur (positive) or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective. This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
3.	0	0	0					<p><u>Local Effects</u> No clear link.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>
4.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could, however, either not occur (positive), or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective. This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p> <p>The 100m buffer may also prevent dust effects on encroaching development, which is positive.</p>
5.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

							<p><u>Plan level / regional / wider effects</u> This preferred policy option would increase the likelihood that infrastructure, and thus the land that it stands on, would be re-used, offsetting the need to create new sites on new land.</p> <p>Non minerals development could, however, either not occur (positive), or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective (e.g. on better or worse quality land or land with better or worse potential). This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
6.	0	0	0				<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
7.	0	0	0				<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>
8.	m +	m +	m +	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding land for ancillary infrastructure could in theory cover safeguarding land for facilities for processing and distribution of substitute, recycled and secondary aggregate material. Where this is the case an indirect positive effect on minimising resources would be expected. However, the current safeguarded sites are for concrete batching, roadstone coating, block making and gas processing which are largely not directly related to minimising resources (though could facilitate this). A further positive is noted as this policy would save new infrastructure from being created, which would save future materials that would have been used in the creation of plant etc. (moderate because 30 sites are safeguarded).</p>
9.	+	+	+				<p><u>Local Effects</u> No clear link.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>

10.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could however, either not occur (positive), or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective. This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
	?	?	?					
11.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could however, either not occur (positive), or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective. This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
	?	?	?					
12.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although this policy might prevent some non-minerals development from going ahead it would also ensure that opportunities for minerals processing in the future are available (which would add value to minerals and help promote economic viability). On balance this is positive.</p>
13.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	?	?	?					

								<p><u>Plan level / regional / wider effects</u> Although this policy might prevent some non-minerals development from going ahead it would also ensure that opportunities for minerals processing in the future would be available (which would add value to minerals and help promote economic viability). This could help preserve jobs, though it may also bring local problems that could affect community vitality (like additional noise / traffic). However, the buffer will help protect receptors from impacts. Broadly positive with some uncertainty.</p>
14.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Safeguarding does not infer any ancillary infrastructure development will take place. Were development to take place it would need to accord with other policies in the plan.</p> <p>Non minerals development could however, either not occur (positive), or be displaced to alternative locations. Such areas may be less or more favourable in terms of this objective. This is an unknown impact, though such development would still need to accord with policies in other plans as well as national policy.</p>
	?	?	?					
15.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although this policy might prevent some non-minerals development from going ahead it would also ensure that opportunities for minerals processing in the future would be available. This could bring local problems that could affect community wellbeing (like additional noise / traffic). However, the buffer will help protect receptors from impacts from development encroachment. Positive with some uncertainty.</p>
	?	?	?					
16.	0	0	0					<p><u>Local Effects</u> No clear link.</p> <p><u>Plan level / regional / wider effects</u> No clear link.</p>
17.	-	-	-	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	+	+	+					

								<u>Plan level / regional / wider effects</u> The option may have negative effects by precluding development, such as some housing projects. However it may also have positive effects by ensuring that there is an available supply of processed minerals for development.
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Summary of assessment There are some very minor benefits that occur because this Policy essentially reduces the likelihood of development within 100m of safeguarded sites. Alternatively it may displace some development, leading to uncertain effects (which depend on the location to which that development is displaced).

Elsewhere in the assessment a moderate benefit was noted relating to minimising resource use, as safeguarding land for ancillary infrastructure would save the need for developing new plant. The Policy also enables retention of minerals ancillary infrastructure development for future use, which would add value to minerals and help promote economic viability.

Effects on communities and health are minimised by the application of the 100m buffer, whereas mixed positive and negative effects were predicted for the changing population objective (as some limited housing development might be displaced, but minerals supply would be facilitated).

Recommendations No recommendations are made.

Policy S06 - Consideration of applications in Consultation Areas

Where development, other than exempt development as defined in the Safeguarding Exemption Criteria list, is proposed in an area safeguarded on the Policies Map for minerals resources, minerals transport infrastructure, minerals ancillary infrastructure and waste infrastructure, and the proposed development site is located outside the City of York and North York Moors National Park areas, consultation with North Yorkshire County Council will be required before permission is granted.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
2.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
3.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
4.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link

5.	0	0	0					<u>Local Effects</u> No clear link
								<u>Plan level / regional / wider effects</u> No clear link
6.	0	0	0					<u>Local Effects</u> No clear link
								<u>Plan level / regional / wider effects</u> No clear link
7.	0	0	0					<u>Local Effects</u> No clear link
								<u>Plan level / regional / wider effects</u> No clear link
8.	+	+	+	✓			✓	<u>Local Effects</u> No clear link
	+	+	+					<u>Plan level / regional / wider effects</u> This policy would indirectly ensure that consideration is given to safeguarding minerals from any development taking place in the boroughs and districts of the NYCC area (preventing needless sterilisation) by ensuring that non-exempt development taking place in safeguarded areas will require consultation with North Yorkshire County Council before permission is granted. It would also ensure that consultation would take place in relation to development which may affect minerals transport infrastructure and ancillary infrastructure, contributing to the safeguarding of infrastructure that supports sustainable minerals development.
9.	0	0	0					<u>Local Effects</u> No clear link
								<u>Plan level / regional / wider effects</u> No clear link
10.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> This policy would indirectly ensure that consideration is given to safeguarding building stone, which may be needed for the repair of historic assets or for ensuring new developments are appropriate in their setting, from any development taking place in the boroughs and districts of the NYCC area. It does this by ensuring that non-exempt development taking

							place in safeguarded areas will require consultation with North Yorkshire County Council before permission is granted.
11.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
12.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
13.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
14.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
15.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
16.	0	0	0				<u>Local Effects</u> No clear link
							<u>Plan level / regional / wider effects</u> No clear link
17.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+				

									<p><u>Plan level / regional / wider effects</u></p> <p>This policy would indirectly ensure that consideration is given to safeguarding minerals, which may be needed to support the population and any new developments, from any development taking place in the boroughs and districts of the NYCC area. Ensuring consultation takes place in relation to development which may affect minerals transport infrastructure and ancillary infrastructure will also contribute to ensuring a supply of minerals to support the population and new developments.</p>
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Summary of assessment. In most cases this Policy has no link with the SA objectives. However, there are indirect positive effects in relation to three objectives. In terms of minimising resource use, this would prevent needless sterilisation⁶⁶ of minerals resources. In terms of the historic environment, building stone may be protected from sterilisation, and these benefits would also support the changing population objective. Similarly requiring consultation with the County Council over development affecting safeguarded infrastructure (minerals transport infrastructure, minerals ancillary infrastructure and waste infrastructure) performs positively as it reduces the need for resource use and supports future supply and distribution of minerals for the population.

Recommendations. No further mitigation is proposed.

⁶⁶ Sterilisation here means that other development may block the ability for a mineral to be extracted, for instance by building on top a minerals reserve.

Policy D01 - Presumption in favour of sustainable minerals and waste development

When considering development proposals the Authorities will take a positive approach that reflects the presumption in favour of sustainable development contained in the NPPF. The Authorities will always work proactively with applicants to find solutions which mean that proposals can be approved wherever possible, and to secure development that improves the economic, social and environmental conditions in the area.

Planning applications that accord with the policies in this Local Plan (and, where relevant, with policies in neighbourhood plans) will be approved without delay, unless material considerations indicate otherwise.

Where there are no policies relevant to the application or relevant policies are out of date then the Authority will grant permission unless:

- Any adverse impacts of granting permission would significantly and demonstrably outweigh the benefits, when assessed against the policies in the NPPF taken as a whole; or
- Specific policies in the NPPF indicate that development should be restricted such as policies relating to National Parks and AONBs. Where proposals constitute major development in the National Park and AONBs they will be assessed against the requirements for major development in designated areas set out in Policy D04 of this Joint Plan.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	?	✓	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u></p> <p>In the short and medium term there would be no effects by having this policy in place as it is essentially saying that proposals which accord with the Plan would be approved, which is what would generally happen either with or without this policy. In the long term effects may arise through the application of the final strand of the preferred policy relating to out of date plans, should the plan become out of date and not be replaced, although by considering the NPPF as a whole (at least in its present form) and having regard to the requirements for major development in designated areas it is considered more likely that any issues pertinent to this objective could still be resolved (though some locally distinctive issues may get a lesser degree of emphasis).</p>

2.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1
3.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1
4.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1
5.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1
6.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1

7.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> As objective 1
8.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> As objective 1
9.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> As objective 1
10.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> As objective 1
11.	0	0	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> As objective 1. However, in the longer term the major development requirements are still applied, which is more positive for designated landscapes.

12.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The emphasis on a pro-active approach to finding solutions is likely to benefit business throughout the plan period. When the plan becomes out of date development world need to accord with the NPPF alone, unless the conditions for the major development test apply. This would be likely to be less restrictive than considering the Plan and the NPPF, subject to future changes in planning policy.
13.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This preferred policy approach takes into account Neighbourhood Plans alongside the Plan and NPPF which is likely to enable decisions to be taken that are less likely to compromise community vitality. Some uncertainty is noted in the longer term as Neighbourhood Plans and this Local Plan may become out of date
			?					
14.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As objective 1
15.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This preferred policy approach takes into account Neighbourhood Plans alongside the Plan and NPPF which is likely to enable decisions to be taken that are less likely to compromise community wellbeing. Some uncertainty is noted in the longer term as Neighbourhood Plans and this Local Plan may become out of date.
			?					
16.	0	0	?	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

Policy D02: Local amenity and cumulative impacts

- 1) Proposals for minerals and waste development, including ancillary development and minerals and waste transport infrastructure, will be permitted where it can be demonstrated that there will be no unacceptable impacts on local amenity, local businesses and users of the public rights of way network and public open space including as a result of:
- noise,
 - dust,
 - vibration,
 - odour,
 - emissions to air, land or water
 - visual intrusion,
 - site lighting
 - vermin, birds and litter
 - subsidence and land instability
 - public health and safety
 - disruption to the public rights of way network
 - the effect of the development on opportunities for enjoyment and understanding of the special qualities of the National Park
 - cumulative effects arising from one or more of the above at a single site and/or as a result of a number of sites operating in the locality

Proposals will be expected as a first priority to prevent adverse impacts through avoidance, with the use of robust mitigation measures where avoidance is not practicable.

- 2) Applicants are encouraged to conduct early and meaningful engagement with local communities in line with Statements of Community Involvement prior to submission of an application and to reflect the outcome of those discussions in the design of proposals as far as practicable.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would work alongside the biodiversity and geo-diversity policy in the plan, so although it does not mention biodiversity and geo-diversity it would result in a number of restrictions to development that may have indirect benefits to biodiversity, such as avoiding unacceptable dust, litter and noise as well as impacts on opportunities for enjoyment and understanding of the National Park (of which the natural environment is an important part).</p>
2.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would work alongside the water environment policy in the plan. In addition it requires demonstration that there will be no unacceptable impacts on communities as a result of emission to water.</p>
3.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would help prevent significant impacts on public rights of way. It may also indirectly help drive improvements to traffic routes in the course of avoiding emissions to air, public health and safety impacts, and noise and vibration. Moderate positive.</p>
4.	+	+	+		✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would reduce dust, odour and other emissions to air after consulting with communities (who are the key receptor for impacts from air) and considering cumulative effects. The policy does not allow unacceptable impacts, which would bring it into line with regulatory guidance, though the community could help to define this.
5.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would reduce the effects of subsidence and land instability which contributes positively to this objective.
6.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Ensuring that emissions to the air are identified and mitigated where necessary should have a positive impact on climate change.
7.	0	0	0				<u>Local Effects</u> There is no clear link between this policy and this objective <u>Plan level / regional / wider effects</u> There is no clear link between this policy and this objective
8.	0	0	0				<u>Local Effects</u> There is no clear link between this policy and this objective <u>Plan level / regional / wider effects</u> There is no clear link between this policy and this objective
9.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Arguably minimising litter could drive a minor amount of waste minimisation.

10.	+	+	+	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As the policy seeks to prevent adverse visual intrusion impacts and impacts on the enjoyment of special qualities of the National Park, this will prevent adverse impacts on the historic environment (particularly when considered alongside the Historic Environment policy).</p>
11.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As the policy seeks to prevent adverse visual intrusion impacts and the enjoyment of special qualities of the National Park, this will prevent adverse impacts on the landscape. Indirectly other impacts (e.g. air quality, litter) will be avoided and help preserve the quality of the landscape.</p>
12.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Avoiding or mitigating any effects from proposals for minerals and waste may have impacts on the viability of some proposals (uncertain effect). The significance of this will depend upon the scale and type of impacts to be addressed. On the other hand, the policy recognises the importance of amenity to local businesses (positive).</p>
13.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would have direct positive effects on ensuring that the conditions to maintain the vitality and functionality of the local community including local businesses would not be adversely affected through the amenity effects of new development. This will include issues such as air quality and dust alongside public safety. The community would be a core part of defining the issues important to them.</p>
14.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This would be positive by ensuring that PROW, open space and the National Park's qualities are not adversely affected or where they are they are appropriately mitigated.
15.	+	+	+	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy would directly consider the impacts of noise, dust, vibration, subsidence, odour and other emissions to air, vermin and litter, visual impact, public safety and access to open space. All of these aspects would have positive impacts on protecting health and wellbeing over the lifetime of the plan. The significance of the effects depends on the interpretation of 'unacceptable', though the community will have the chance to influence this.
16.	0	0	0				<u>Local Effects</u> There is no clear link between this policy and this objective. <u>Plan level / regional / wider effects</u> There is no clear link between this policy and this objective.
17.	+	+	+	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The community would be involved in decision making through this objective

Summary of assessment Broadly this Policy performs very well against the sustainability appraisal objectives. In particular it strongly contributes to the wellbeing, health and safety objective, as well as objectives where it directly seeks to reduce relevant impacts, such as impacts to water and air. Although broadly positive for the economy as amenity is important to local businesses, there is an uncertain effect on the viability of some proposals.

Recommendations No mitigation is proposed for this Policy. It will be important to address the uncertain effect on the viability of the local minerals industry through monitoring economic conditions in the industry through the sustainability appraisal.

Policy D03 - Transport of minerals and waste and associated traffic impacts

1) Where practicable minerals and waste movements should utilise alternatives to road transport including rail, water, pipeline or conveyor.

Where road transport is necessary, proposals will be permitted where:

- There is capacity within the existing network for the level of traffic proposed and the nature, volume and routing of traffic generated by the development would not have an unacceptable impact on local communities, businesses or other users of the highways network, or any such impacts can be appropriately mitigated, for example by traffic controls, highway improvements and traffic routing arrangements; and
- Access arrangements are appropriate to the volume and nature of any road traffic generated and safe and suitable access can be achieved for all users of the site, including the needs of non-motorised users, where relevant; and
- There are suitable arrangements in place for on-site manoeuvring, parking and loading/unloading.

Where access infrastructure improvements are needed to ensure that the requirements above can be compiled with, information on the nature, timing and delivery of these should be included within the proposals.

2) For all proposals generating significant levels of road traffic, a transport assessment and green travel plan will also be required to demonstrate that opportunities for sustainable transport and travel have been considered and will be implemented where practicable.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> While it could be argued that to some degree this will lessen the incidence of wildlife road kill, given that the policy allows road transport where necessary the effect is likely to be insignificant.</p>

2.	0	0	0					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Road transport can, through run off of pollutants and dust, affect water quality. However, alternatives may also have water quality impacts. It is unlikely that there will be significant change from the baseline at a plan level through this policy however.</p>
3.	m +	m +	m +	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would ensure that alternative transport modes to road have been utilised where available and that mitigation is implemented where applicable. This policy would also have positive implications for congestion in some places through an understanding of the impact of the site on the existing road network and through supporting infrastructure improvements. The policy would also consider sustainable travel options for workers through green travel plans.</p>
4.	m +	m +	m +	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Sustainable transport is supported by the policy, which will improve air quality, though the policy will also allow for road transport – which is less positive. Traffic routing agreements and green travel plans are likely to ensure that the most significant local air quality impacts from traffic are avoided.</p>
5.	0	0	0					<p><u>Local Effects</u> There is no clear link between the policy and the objective.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective.</p>

6.	+	+	+	✓			✓	<p><u>Local Effects</u> There is no clear link between the policy and the objective.</p> <p><u>Plan level / regional / wider effects</u> Green travel plans, sustainable transport and use of alternatives to road transport are likely to reduce CO₂. However, traffic routing agreements may result in some longer journeys, and as the policy contains no priority for proposals that are sustainably located in terms of transport the effect on reducing emissions is only likely to be minor at best. To some degree this last effect may be moderated by the policy approach to the overall distribution of sand and gravel which gives consideration to proximity to market for that resource.</p>
7.	0	0	0					<p><u>Local Effects</u> There is no clear link between the policy and the objective.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective.</p>
8.	0	0	0					<p><u>Local Effects</u> There is no clear link between the policy and the objective</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective.</p>
9.	0	0	0					<p><u>Local Effects</u> There is no clear link between the policy and the objective.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective.</p>
10.	0	0	0					<p><u>Local Effects</u></p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the policy and the objective.</p>
11.	?	?	?					<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The determination of routes, traffic volumes and any road network improvements could positively or negatively affect localised areas in relation to minerals or waste sites, particularly in sensitive landscapes within the Plan area. The results of this are currently uncertain, but are likely to be moderated to at worst a low level of impact due to linkages to the landscape policy in the 'key links to other relevant policies and objectives' box.</p>

12.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy will allow a fairly flexible approach to minerals development in particular, which is often well away from non-road transport networks. It will also take steps to minimise disruption for other road users.</p>
13.	+	+	+	✓	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The consideration of the local road network / traffic routing as well as suitable arrangements for on-site vehicle manoeuvring, parking and loading/unloading etc. should help to minimise effects on local communities as it will ensure effects on congestion around communities are minimised.</p>
14.	0	0	0					<p><u>Local Effects</u> There is no clear link between the preferred policy and the objective.</p> <p><u>Plan level / regional / wider effects</u> There is no clear link between the preferred policy and the objective.</p>
15.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The consideration of the local road network / traffic routing as well as suitable arrangements for on-site vehicle manoeuvring, parking and loading/unloading should help to minimise effects on peoples' health and well-being as it will consider safety in relation to road access. Consideration of sustainable travel would also reduce the vehicles on roads to a limited degree. However, road transportation of mineral and waste overall may still have negative effects on noise, vibration and odour on communities along preferable routes and this policy does little to promote the overall reduction in road transport by location close to market. However, other policies in the plan may moderate this to a degree (e.g. the policy approach to the overall distribution of sand and gravel / amenity and cumulative impacts). Clear linkage between this policy and the amenity and cumulative impacts policy (D02) in particular should be included in the 'key links to other relevant policies and objectives' box to help moderate effects.</p>
	?	?	?					

16.	0	0	0					<u>Local Effects</u> There are no clear links between this preferred policy and the objective.
								<u>Plan level / regional / wider effects</u> There are no clear links between this preferred policy and the objective.
17.	+	+	+	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
								<u>Plan level / regional / wider effects</u> Having this preferred policy would require an understanding of how people get to and from the site as well as a green travel plan to ensure this can be done in the most sustainable way. Overall, this is considered to have a positive effect on ensuring the needs of the workers are considered in terms of accessing employment in minerals and waste.

Summary of assessment Mostly this Policy either supports or has no effect on the SA objectives. Key positives relate to the transport, air quality, climate change, economic growth, community vitality and population needs objectives. Some uncertainty was noted in relation to the effect of road improvements, etc., on sensitive landscapes as well as a mixed positive / uncertain outcome for the health and wellbeing objective as the Policy supporting text currently does not link well to other policies relating to amenity and cumulative impacts.

Recommendations Better linkages between this policy and the amenity / cumulative effects policy (D02) in the 'key links to other relevant policies and objectives' box would help reduce the uncertainties identified in this assessment.

Policy D04 - Development affecting the North York Moors National Park and the AONBs

Part 1) – Major minerals and waste development

Proposals for major development in the National Park, Howardian Hills, Nidderdale, North Pennines and Forest of Bowland Areas of Outstanding Natural Beauty will be refused except in exceptional circumstances and where it can be demonstrated it is in the public interest. The demonstration of exceptional circumstances and public interest will require justification based on the following:

- a) The need for the development, which will usually include a national need for the mineral or the waste facility and the contribution of the development to the national economy; and
- b) The impact of permitting it, or refusing it upon the local economy of the National Park or AONB; and
- c) Whether the development can technically and viably be located elsewhere outside the designated area, or the need for it can be met in some other way; and
- d) Whether any detrimental effect on the environment, the landscape and recreational opportunities, can be moderated to a level which does not significantly compromise the reason for the designation.

Where there are exceptional circumstances and the proposal is considered to be in the public interest, every effort to avoid adverse effects will be required. Where adverse effects cannot be avoided, harm should be minimised through appropriate mitigation measures. Appropriate and practicable compensation will be required for any avoidable effects which cannot be mitigated.

Part 2) – All other developments

Planning permission will be supported where proposals contribute to the achievement of, or are consistent with, the aims, policies and aspirations of the relevant Management Plan and are consistent with other relevant development management policies in the Joint Plan.

Part 3) – Proposals which impact the setting of Designated Areas

Proposals for development outside of the National Parks and AONBs will not be permitted where it would have a harmful effect on the setting of the designated area.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may result in positive biodiversity/geodiversity impacts as a number of designated ecological/geodiversity sites lie within the National Park and AONBs and this policy would only allow major development in these areas in exceptional circumstances and where any detrimental effects on the environment could be moderated to a level which does not significantly compromise the reason for the designation.</p> <p>In terms of development outside of the National Parks and AONBs which may affect the setting of those resources, there may be minor positive effects should mitigation to protect the landscape results in landscaping which also provides biodiversity benefits. However, elsewhere the policy may encourage some development to seek locations outside of designated areas (an indirect effect). This is less likely to have a detrimental effect on biodiversity / geodiversity than inside designated areas, so the net effect is still considered positive.</p>
2.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There may be indirect positive effects on water quality in the National Park and AONBs should development be more restricted in these areas as a result of this policy. Elsewhere, if development chooses to locate outside of designated areas due to this policy, there may be effects, but these effects are location specific, so uncertainty is noted (though effects would be minimised by development management policies).</p>
3.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> There could be indirect positive effects on transport miles should the option direct development away from the National Park and AONBs. This would also tend to push such development to parts of the Plan area that are better served by high quality transport infrastructure or are closer (though not always) to large markets (having a positive effect on the Plan area as a whole).</p>

4.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this option there may be positive effects on air quality in the National Park and AONBs as the policy's requirements for major development include consideration of impacts on the environment. There may be negative effects on air quality elsewhere in the Plan area should this option direct development to other locations, however it is considered that due to air quality being part of the special qualities of these areas that on balance the effects would be positive.</p>
5.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Agricultural land quality in the National Park and the AONBs is generally low so there are unlikely to be any particularly positive effects from restricting development in these areas. However, there may be negative effects should the policy direct development to areas outside of the National Park and AONBs which generally have higher quality agricultural land.</p>
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The positive effects for transport could also have positive effects for climate change. Carbon rich soils in the National Park could also benefit.</p>
7.	0	0	0				No clear link
8.	0	0	0				No clear link
9.	0	0	0				No clear link
10.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-				

								<p><u>Plan level / regional / wider effects</u> This policy may result in positive cultural heritage impacts as a number of designated historic assets/areas of high archaeological potential lie within the National Parks and AONBs and this policy would only allow major development in these areas in exceptional circumstances and where any detrimental effects on the environment could be moderated. However, this policy may also restrict the supply of local building stone from within the National Parks and AONBs which may have a negative effect if it impacts upon maintenance of the distinctive character of the designated areas (i.e. shortage of local stone to repair buildings etc.).</p>
11.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to result in major positive landscape impacts as major development would only be allowed in these high value landscapes in exceptional circumstances and where any detrimental effects on the environment and landscape could be moderated. For smaller developments, positive effects would occur should the landscape policy of the Plan contain reference to impact on the landscape of the National Park and AONBs (as it currently does). This policy would also help to protect the settings of the National Parks and AONBs, which is not covered within national policy, and would therefore have a strong positive effect on these areas. Minerals and waste developments by their nature are often large scale and industrial in appearance and could be particularly damaging to the setting of these areas. Although there may be localised negative effects on landscapes elsewhere in the Plan area (to which other development management policies apply), on balance affording a high level of protection to nationally protected areas is strongly positive.</p>	
12.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy contains consideration of impacts on the local and national economy but overall is likely to restrict development within the National Parks and AONBs and their settings. On one hand this could have a negative impact upon the economy and job creation by limiting local employment opportunities and the supply of minerals and waste facilities. Conversely, effects could be positive due to the importance of the tourism sector to the economies of these areas, which could be harmed by minerals and waste developments within the designated area or in close proximity.</p>	

13.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy consideration would be given to the impact on the local economy, which would include the tourism sector. In addition, should the option restrict major developments in the National Park and AONBs this would help to retain the tourism attraction element of these designations.</p>
14.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Under this policy, the major development test includes consideration of any effects on recreational opportunities and would therefore have a positive effect in relation to major developments. By not allowing development outside of the National Parks and AONBs which would have a harmful impact upon the setting of the designated areas, this option will help to maintain the recreation experience of these protected areas by restricting developments that would detract from the quality of environment (including views from and to the areas, particularly upland areas). Although some development may choose to locate to other parts of the Plan area as a result of this policy, the net effect of this policy (which protects possibly the most important recreational assets in the Plan area) remains strongly positive.</p>
15.	+	+	+		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Jobs in the minerals and waste sector may be more restricted in designated landscapes as a result of this policy (and jobs are important for wellbeing) though tourism is likely to benefit. Any health effects associated with minerals and waste sites will be less likely to happen in designated landscapes, and possibly more likely to happen elsewhere. Positive and negative.</p>
16.	0	0	0				No clear link.
17.	0	0	0				No clear link.

Summary of assessment Whilst the assessment identifies that there may be negative effects for the economy of these areas through restricting minerals and waste developments it also identifies potential positive effects on the tourism economy of maintaining these high quality environments. Particularly positive impacts have been identified in relation to recreation and leisure and landscape whilst some minor negative impacts have been identified in relation to land use, as development may be displaced to areas of higher agricultural land value, and cultural heritage, as this policy may restrict the supply of local building stone in the National Parks and AONBs. There are mixed effects for health and wellbeing as development will be less likely to happen in designated landscapes, reducing health effects there, but that development may take place somewhere else in the Plan area.

Recommendations Overall the Policy is considered to be largely positive and no mitigation is suggested.

Policy D05 - Minerals and waste development in the Green Belt

Part 1) - Minerals

Proposals for minerals development within the York and West Yorkshire Green Belts will be supported where it would preserve the openness of the Green Belt and, where the development would be located within the York Green Belt, would preserve the historic character and setting of York. Where minerals extraction in the Green Belt is permitted, reclamation and afteruse will be required to be compatible with Green Belt objectives.

Part 2) - Waste

Proposals for waste development in the Green Belt, including new buildings or other forms of development which would result in an adverse impact on the openness of the Green Belt or on the purposes of including land within the Green Belt, including those elements which contribute to the historic character and setting of York, will be considered inappropriate.

Substantial weight will be given to any harm to the Green Belt and inappropriate waste development in the Green Belt will only be permitted in very special circumstances, which must be demonstrated by the applicant, in which the harm by reason of inappropriateness, or any other harm, is clearly outweighed by other considerations.

The following forms of waste development will be appropriate in the Green Belt provided they preserve the openness of the Green Belt and do not conflict with the purposes of including land in the Green Belt, including those elements which contribute to the historic character and setting of York:

- i) open windrow composting;
- ii) individual farm-scale on-farm composting and anaerobic digestion;
- iii) recycling of construction and demolition waste in order to produce recycled aggregate where it would take place in an active quarry or minerals transport site and is linked to the life of the quarry or site;
- iv) short term waste sorting and recycling activity in association with, and on the same site as, other permitted demolition and construction activity;
- v) recycling, transfer and treatment activities at established industrial and employment sites in the Green Belt where the waste development would be consistent with the scale and nature of other activities already taking place at the site;
- vi) landfill of quarry voids including for the purposes of quarry reclamation and where the site would be restored to an after use compatible with the purposes of Green Belt designation;
- vii) small scale deposit of inert waste for agricultural improvement purposes or the improvement of derelict or degraded land; and
- viii) continued activities within the footprint of established waste sites in the Green Belt.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although there is biodiversity / geodiversity interest in the Green Belts, they are not significantly more bio-diverse / geo-diverse than the wider Plan area. So the effect of the policy is considered to be broadly neutral (as there is no greater chance that development in the Green Belt would be any better or worse for the SA objective than development elsewhere).</p>
2.	0	0	0					<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although there is water quality / quantity interest in the Green Belts, they are not significantly more designation rich than the wider Plan area. So the effect of the policy is considered to be broadly neutral (as there is no greater chance that development in the Green Belt would be any better or worse for the SA objective than development elsewhere).</p>
3.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As Green Belts lie close to urban areas, which are markets for minerals and sources of waste, this policy, which supports minerals development in the Green Belt provided openness is maintained and character is protected, has a beneficial effect on the transport SA objective. In terms of waste, the clarity as to what would be acceptable is also mildly beneficial, though substantial weight is placed on protecting, for example the special character and setting of York, and this may mean that some larger scale developments in particular may not be approved. This may mean that waste transit vehicles may need to travel further afield to reach waste management facilities (rated here as a moderate negative effect).</p>
4.	-	-	-		✓		✓	As shown by SA objective 3 there could be more traffic generated as a result of the policy). We have rated this as minor negative.
5.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

	-	-	-				level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option will essentially direct suitable waste management (other than windrow composting and small scale farm composting and anaerobic digestion) to locations where high quality soils are unlikely to be lost (such as quarry voids, or within the footprint of established waste sites). This will benefit the objective. Minerals development will be required to preserve the openness, but may still have a significant impact on higher quality farmland (a reasonable proportion of which is contained within Green Belts). However, sites would be required to be restored in a way that is compatible with Green Belt objectives (which would likely involve re-instating soils).
6.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> As minerals development will be acceptable where it will preserve openness of the Green Belt, and the categories of waste development that may be acceptable are made clear, this policy will allow suitable development (and deter inappropriate development). This clarity should at least allow suitable minerals development to come forward which will benefit from a proximal relationship to urban areas (which would be a continuation of existing policy drivers rather than a new effect). This will have mildly beneficial effects on transport and a corresponding mildly beneficial relationship with this climate change objective. In terms of the waste component of this policy, the situation is negative as some waste development may be located further away from urban areas, which would generate more carbon.
7.	0	0	0				There is no clear link between the preferred policy and the objective.
8.	0	0	0				This preferred policy would not have a material impact on resource use.
9.	-	-	-	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy may drive some waste developments to less optimal locations (which may affect costs or even viability for more some future facilities, affecting their ability to be managed nearer to the top of the waste hierarchy).
10.	m +	m +	m +	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	?	?	?				

							<p><u>Plan level / regional / wider effects</u> The preferred policy's approach would allow mineral extraction in the Green Belt, but only where it is consistent with the reasons for its designation. This would require an understanding of a site's impact in relation to the primary purposes of the Green Belt designation for that area. The majority of Green Belt in the Plan area is primarily designated to preserve the character and settings of historic towns and cities such as York. So at least in terms of protecting the historic character of towns, the policy is positive.</p> <p>Under this preferred policy most waste development would, unless aligned with the policy, be inappropriate, though certain categories of development would clearly be acceptable where they protect the openness of the Green Belt. This would restrict some waste development, which would have beneficial effects on the settings of historic towns. Indirectly some development may ultimately be driven elsewhere to locations that may be better or worse in terms of historic character (adding a little uncertainty to the assessment). Other effects such as impacts on historic designations or on archaeology are location dependent, but at this strategic level there is no evidence to suggest the Green Belt is more or less valued in terms of the historic environment (other than for the settings of towns) than the wider Plan area.</p>
11.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The preferred policy's approach would allow mineral extraction in the Green Belt but only where it is consistent with the reasons for its designation. Waste development is likely to be more restricted. For the same reasons outlined in objective 10, this would protect townscape character. As the policy would also protect the openness of the Green Belt this is likely to ensure that extant landscape character is broadly maintained. Restoration and reclamation of minerals sites must also avoid conflict with the Green Belt designation. This is likely to be broadly positive for landscape, not just because it protects the setting of the historic town, but also because other Green Belt purposes will be respected (for instance, urban sprawl would be avoided, or derelict land affecting the townscape might be recycled as the Green Belt is maintained). While some development may be directed elsewhere, the many other policies in the plan with landscape considerations are likely to moderate any effect of this down to low levels. Overall highly positive.</p>
12.	+	+	+		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may have positive effects for enabling minerals extraction should it fall within the Green Belt area (this is broadly a continuation of the status quo for minerals sites). However, the policy will prove more restrictive for locating waste sites, given that in many cases they will be considered inappropriate. This may mean lost employment opportunities for key towns, or indirectly it may mean greater costs to local businesses when dealing with some wastes.</p>

13.	+	+	+		✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may allow appropriate minerals development to continue to occur in the Green Belt, which may support a number of jobs. Some future waste development may be harder to achieve in the Green Belt. This may benefit communities as urban fringe locations are less likely to suffer further loss of rural character, so businesses that depend on this character (e.g. pubs, hotels) will benefit. Otherwise, however, the situation is likely to broadly neutral for communities.</p>
14.	+	+	m +	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As Green Belt is accessible to a greater number of people than most other parts of the Plan area, protecting its openness and restricting waste development is likely to have broadly positive effects on recreation⁶⁷, and in the longer term increased positive effects may result due to accessible minerals restoration.</p>
15.	+	+	m +	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As Green Belt is accessible to a greater number of people than most other parts of the Plan area, protecting its openness and restricting waste development is likely to benefit recreation, with indirect positive effects on the betterment of health due to continued access to less disturbed Green Belt land⁶⁸, and in the longer term increased positive effects due to accessible minerals restoration.</p>

⁶⁷ According to CPRE “Green Belt land by its very nature is the ‘countryside next door’. It offers major opportunities for ensuring that everyone has easy, car free access to the countryside, allowing people from the innermost parts of a city to be able to walk or cycle to a high quality, open countryside.....access to the countryside for quiet outdoor recreation is important for the nation’s health and wellbeing – especially at a time of rising health concerns over obesity and how little exercise people take”. CPRE, 2005. Green Belts 50 years on. CPRE, London.

⁶⁸ According to CPRE “Green Belt land by its very nature is the ‘countryside next door’. It offers major opportunities for ensuring that everyone has easy, car free access to the countryside, allowing people from the innermost parts of a city to be able to walk or cycle to a high quality, open countryside.....access to the countryside for quiet outdoor recreation is important for the nation’s health and wellbeing – especially at a time of rising health concerns over obesity and how little exercise people take”. CPRE, 2005. Green Belts 50 years on. CPRE, London.

16.	0	0	0						<u>Local Effects</u> No clear link.
									<u>Plan level / regional / wider effects</u> No clear link.
17.	0	0	0						<u>Local Effects</u> No clear link.
									<u>Plan level / regional / wider effects</u> No clear link.

Summary of assessment For some SA objectives the predicted effects for the waste and minerals parts of this Policy diverge, with a continuation of minor positive effects resulting from minerals development noted for the transport and climate change objectives, while at the same time negative effects are noted that arise from a number of restrictive factors in relation to waste sites in the Green Belt. Similarly, for the economy SA objective, while minerals sites may continue to bring jobs to Green Belt communities, waste related jobs may become scarcer (though it could also be argued that the policy is less restrictive than national policy, so from that perspective may support jobs).

Elsewhere effects are broadly neutral or positive, with strong (though indirect) positive effects noted for landscape. The soils objective notes positive effects from the policy's approach to waste in relation to conserving soils (as in the Green Belt allowable waste development will mostly be located in places such as quarry voids or established industrial sites), while negative effects are noted for minerals development (as the Green Belts coincide with a large amount of higher quality grade 2 and 3 land). Similarly effects on the waste hierarchy may be negative, as the Policy may drive some facilities to less optimal locations (which may affect the costs of operating waste sites or even viability for more some future facilities).

While the historic environment is predicted to benefit from this Policy's emphasis on protecting the special character of York, uncertain indirect effects were noted as some development may be displaced to other locations and have other impacts on the objective.

Recommendations This Policy largely complements overall national policy objectives and affords a level of protection that, while having some minor effects, is balanced by a broad sweep of positive effects. Therefore no mitigation is recommended.

Policy D06 – Landscape

- 1) All landscapes will be protected from the harmful effects of development. Proposals will be permitted where it can be demonstrated that there will be no unacceptable impact on the quality and/or character of the landscape, having taken into account any proposed mitigation measures.
- 2) For proposals which may impact on nationally designated areas including the National Park, AONBs, and the adjacent Yorkshire Dales National Park, a very high level of protection to landscape will be required. Development which would have an unacceptable landscape impact on these areas will not be permitted.
- 3) Protection will also be afforded to the historic character and setting of York and to areas defined as Heritage Coast. Permission will only be granted where it would not lead to an unacceptable impact on the historic character or setting of York or on the undeveloped character of Heritage Coast, unless the need for, or benefits of, the development outweigh the harm caused.
- 4) Where proposals may have an adverse impact on landscape, tranquillity or dark night skies, schemes should provide for a high standard of design and mitigation, having regard to landscape character, the wider landscape context and setting of the site and any visual impact, as well as for the delivery of landscape enhancement where practicable.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓				✓
	?	?	?					
								<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may have a positive impact on biodiversity/geo-diversity of the National Park, AONBs, coastal areas and the city of York as development may be encouraged away from these areas. A number of the Plan areas' designated biodiversity/geo-diversity sites lie in these areas. There is an element of uncertainty in this assessment as development may be displaced to other parts of the Plan area that do not lie within or close to a landscape designation but have a high biodiversity/geo-diversity value.</p>
2.	-	-	-	✓				✓
	?	?	?					
								<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> There is some uncertainty as to this policy's effect on water quality and supply. For instance, the emphasis placed on regard for the setting of statutory and non-statutory landscapes may encourage some clustering of sites away from these designations (and towards other constraints such as Nitrate Vulnerable Zones or Source Protection Zones). This would be negative, though uncertain.</p>
3.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Although effects are small scale, if this policy results in a shift away from protected landscapes and their settings (which tend to be the more remote areas of the Plan area) it is likely to also result in sites that are situated closer to markets and are more accessible to employees. York is an exception to this as should the policy encourage minerals and waste development away from the city, transport miles may increase in order to process waste/deliver minerals to this market.</p>
	-	-	-					
4.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may direct development away from the City of York and the Air Quality Management Areas that exist within the city (emissions/transport to site would therefore not contribute to these areas of already high pollution). As recorded under objective 3, this policy may also move development closer to markets within the Plan area (as protected landscapes tend to be the most sparsely populated areas). This may decrease transport miles and have a knock on positive effect on air quality. Conversely, longer journey times may result in order to process waste / deliver minerals to market in the City of York could have a knock on negative impact on air quality.</p>
	-	-	-					
	?	?	?					
5.	-	-	-	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> By steering developments away from the most sensitive landscapes (which are often on land of lower soil quality) this policy will increase the likelihood that negative effects may occur on the best and most versatile land in central parts of the Plan area.</p>
	+	+	+					
	-	-	-					
6.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					

								<u>Plan level / regional / wider effects</u> This policy may support Objective 6's sub objective: 'promote carbon storage through appropriate land management'. This is because it may steer inappropriate development away from areas with the highest existing carbon storage such as the National Park (areas of peat in particular). This policy may also reduce distance to markets, and thus carbon emissions, by limiting the potential for development in the less accessible parts of the Plan area (i.e. the protected landscapes). Conversely, steering development away from the City of York may increase carbon emissions associated with minerals and waste development in this area. Impacts are therefore a combination of minor positive and minor negative.
7.	0	0	0					No clear link.
8.	0	0	0					No clear link.
9.	0	0	0					No clear link.
10.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. - - - <u>Plan level / regional / wider effects</u> This policy is likely to have a positive impact in terms of protecting the setting of heritage assets in the City of York and a high level of landscape protection for designated areas will also benefit the setting of historic assets in these areas. Some negative impacts may result from this policy as it is likely to restrict the number of minerals developments that take place in the National Park which may in turn reduce the supply of building stone from this area that may be required to repair historic buildings and maintain local distinctiveness. Although some undesignated landscapes may also contain important historic features that may form a component of landscape character, these would be protected through policy D08.	
11.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy is very compatible with most SA sub objectives and offers strong protection to designated landscapes.	
12.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. - - -	

								<p><u>Plan level / regional / wider effects</u> This policy may have a positive impact as it may steer sites closer to markets (other than York) therefore encouraging a low carbon economy and supporting jobs closer to existing businesses and the workforce. Should this policy prevent development from going ahead, this would reduce mineral supply/waste processing facilities and have a minor negative impact.</p>
13.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					<p><u>Plan level / regional / wider effects</u> This policy may have a positive impact on community vitality and viability by protecting landscapes of the National Park, AONBs, coast and City of York; areas where tourism assets tend to be concentrated within the Plan area. The policy may however encourage clustering of development outside of designated landscapes and may negatively impact the vitality of communities there. Impacts could be minor positive or minor negative for different parts of the Plan area.</p>
14.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
								<p><u>Plan level / regional / wider effects</u> This policy would help protect the recreation value of the National Parks, AONBs, heritage coast and the City of York by steering inappropriate / unacceptable development away from them.</p>
15.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>
	-	-	-					<p><u>Plan level / regional / wider effects</u> This policy is likely to maintain a high quality environment, particularly in those areas of high landscape value, with some benefits to overall wellbeing⁶⁹. Some negative amenity impacts may be experienced in areas of lower landscape value outside of the designated areas should development cluster in these locations (though this will most likely be mitigated to low levels by other development management policies).</p>

⁶⁹ See for example: Verlade et al, 2007. Health effects of viewing landscapes – landscape types in environmental psychology. Urban Forestry and Greening (6) 2007, pp199 – 212

16.	-	-	-	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The protection afforded to designated landscapes is likely to steer development away from the higher parts of the Plan area and towards areas of greater flood risk. Also less benefit from flood storage/alleviation is likely to occur lower down the catchment.</p>
17.	0	0	0				No clear link.

Summary of assessment This Policy is likely to result in a number of positive impacts particularly in relation to protection of the landscape. This is likely to also result in positive impacts in relation to cultural heritage, tourism and amenity in those areas of high landscape value. This Policy may to some extent result in a clustering of development outside of the designated and high value landscapes in the Plan area therefore resulting in cumulative negative impacts. These would largely be moderated by other development management measures in the Joint Plan.

Recommendations None noted.

Policy D07 - Biodiversity and geodiversity

Assumptions – It is assumed that biodiversity offsetting would not be used as a means of making unacceptable development acceptable.

- 1) Proposals will be permitted where it can be demonstrated that there will be no unacceptable impacts on biodiversity or geodiversity, including on statutory and non-statutory designated or protected sites and features, including Sites of Importance for Nature Conservation, Sites of Local Interest and Local Nature Reserves local priority habitats, habitat networks and species, having taken into account any proposed mitigation measures.
- 2) A very high level of protection will be afforded to sites designated at an international level, including SPAs, SACs and RAMSAR sites. Development which would have an unacceptable impact on these sites will not be permitted.
- 3) Development which would have an unacceptable impact on the notified special interest features of a SSSI or a broader impact on the national network of SSSIs, or the loss or deterioration of ancient woodland or aged or veteran trees, will only be permitted where the benefits of the development would clearly outweigh the impact or loss.
- 4) Where development would be located within an Impact Risk Zone defined by Natural England for a SPA, SAC, Ramsar site or SSSI, and the development is of a type identified by Natural England as one which could potentially have adverse impact on the designated site, proposals should be accompanied by a detailed assessment of the potential impacts and include proposals for mitigation where relevant.
- 5) Through the design of schemes, including any proposed mitigation measures, proposals should seek to contribute positively towards the delivery of agreed biodiversity and/or geodiversity objectives, including those set out in agreed local Biodiversity or Geodiversity Action Plans, or in line with agreed priorities of any relevant Local Nature Partnership, with the aim of achieving net gains for biodiversity or geodiversity and supporting the development of resilient ecological networks.
- 6) In exceptional circumstances, and where the development site giving rise to the requirement for offsetting is not located within a SPA, SAC, RAMSAR or SSSI, the principle of biodiversity offsetting to fully compensate for any losses will be supported. These circumstances include where:
 - i) It has been demonstrated that it is not possible to avoid or mitigate against adverse impacts; and
 - ii) The provision of compensatory habitat within the site would not be feasible; and
 - iii) The need for and/or benefits of the development override the need to protect the site; and
 - iv) Any compensatory gains would be delivered within the minerals or waste planning authority area in which the loss occurred.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	

1.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would have strong direct positive effects against this objective by ensuring development is only supported where there would be no unacceptable impact on biodiversity and geodiversity. The policy provides a very high level of protection to nationally and internationally designated sites. The policy also aims to achieve net gains for biodiversity and geodiversity by working towards objectives set out in the Biodiversity/Geodiversity Action Plans and the priorities of the Local Nature Partnership. Biodiversity offsetting may also result in some positive impacts by enabling biodiversity/geodiversity gains to be secured elsewhere where new development is permitted that would result in biodiversity/geodiversity losses. However, some uncertainty exists in relation to biodiversity offsetting particularly around irreplaceable habitats such as ancient woodland as the loss of such features could not be replaced through offsetting and this policy would not therefore provide benefits for such habitats.</p>
2.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option could have indirect positive effects on water quality as protecting and enhancing areas for biodiversity is likely to ensure that water quality is protected or in some cases improved (e.g. through the creation of reed beds). Providing a high level of protection to internationally and nationally designated sites, including SPA's, SAC's, Ramsar sites and SSSIs will ensure that a number of water bodies within the Plan area are afforded a high level of protection including sections of the River Derwent (designated as an SAC) and the Humber Estuary (SPA, SAC, Ramsar). The reference to SSSI Impact Risk Zones in the policy is likely to create added certainty that hydrological effects on designated sites are considered, as hydrological risks are highlighted in the Impact Risk Zones.</p>
3.	0	0	0				No clear link.
4.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option could have indirect positive effects on air quality as protecting and enhancing areas for biodiversity is likely to ensure that air quality is protected near to sensitive biodiversity sites, or in some cases improved.</p>
5.	+	+	+	✓		✓	<p><u>Local Effects</u></p>

							<p>Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option is likely to have positive effects on soil quality as protecting and enhancing biodiversity/geodiversity is likely to involve protecting, and in some cases improving, soils.</p>
6.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Maintaining habitats in situ would have positive effects relating to maintaining stores of carbon, particularly should this relate to grasslands, heathland and woodlands. While biodiversity offsetting may lead to net gains for the biomass contained in habitats, it is less clear if that portion of the carbon held in underlying substrates would be retained, or allowed time to mature. For instance, loss of deep peat substrate may lead to loss of a carbon store. This leads to an element of uncertainty.</p>
	?	?	?				
7.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would enable consideration to be given to the effects a development may have on local habitat networks, enabling these to specifically be protected or enhanced, thus providing a contribution towards climate change adaptation. Over the longer term effects may become more positive, either in respect of the creation of better networks or because the significance of the networks increases as effects of climate change increase.</p> <p>Retaining habitats also plays an important role in moderating the effects of climate change, such as through flood risk regulation and (in urban areas) temperature regulation.</p>
8.	0	0	0				No clear link.
9.	0	0	0				No clear link.
10.	0	0	0				No clear link.
11.	m	m	m	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option could have indirect positive effects on landscape as protecting and enhancing areas for biodiversity is likely to also ensure that the landscape is protected, as habitats are an integral part of the landscape.</p>
	+	+	+				

12.	-	-	-	✓	✓		<p>✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option may have a negative effect should it lead to the prevention of a particular development, however overall the protection and enhancement of biodiversity is integral the provision of an environment which is attractive for investors and may have positive effects in this respect. Linking with local biodiversity and geodiversity objectives may be particularly beneficial as these have been set in the context of the economy and characteristics of the local area.</p> <p>It is considered that biodiversity offsetting would also allow developers additional flexibility over the location of development with broadly positive effects on this objective.</p>
	+	+	+				
13.	-	-	-	✓	✓		<p>✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The option may have a negative effect should it lead to the prevention of a particular development (or, through biodiversity offsetting, leads to the loss of a habitat that is important to the continued vitality of a community). However, overall the protection and enhancement of biodiversity is integral to the provision of an environment which is attractive for investors, and therefore leads to job creation, and may have positive effects in this respect. Also, maintaining biodiversity can help to maintain an attractive environment which supports tourism. Linking with local biodiversity objectives may be particularly beneficial as these have been set in the context of the economy and characteristics of the local area.</p>
	+	+	+				
14.	m	m	m	✓			<p>✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The Special Qualities of the National Park include 'A special mix of upland, lowland and coastal habitats; [and] a wide variety of wildlife dependent on these' and therefore protecting and enhancing biodiversity in the National Park will have positive effects on providing opportunities for understanding and enjoying the Park (the second statutory purpose). Elsewhere, there are likely to be similar benefits where the recreational experience is supported by the presence of habitats and wildlife. The policy's strong protection for biodiversity / geodiversity is likely to offer protection to valued wildlife areas and may even create new wildlife / geology areas. These may deliver services such as access to recreation.</p>
	+	+	+				
15.	+	+	+	✓			<p>✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> If the biodiversity offsetting provision is improving/increasing a biodiversity asset that also had value to the local community, this option would have positive effects as it would be replacing the asset with a new (larger/improved) one within the same area. However, there is uncertainty as to whether an offset would continue to be accessible. Elsewhere, the policy's strong protection for biodiversity / geodiversity is likely to offer protection to valued wildlife areas and may even create new wildlife / geology areas. These may deliver ecosystem services such as access to recreation or pollution regulation services of benefit to communities.
16.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Retaining natural habitats and minimising areas of hard standing can help to minimise the risk of flooding. This policy may therefore indirectly have a minor positive impact in relation to this objective.
17.	-	-	-	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Protecting biodiversity may have a negative effect on this objective should it result in minerals developments not coming forward, leading to a lack of materials for development and other uses.

Summary of assessment This Policy will have a range of largely positive effects as it will enable the protection and enhancement of biodiversity and therefore valuable ecosystem services (important services provide by nature), such as water or air quality improvements, carbon storage benefits, or increased access to outdoor space. It may also benefit the local economy, helping to ensure that the Plan area remains attractive to tourists and investors. Some uncertainty was however noted in relation to biodiversity offsetting which while seeking to provide a net gain, might fail to fully replicate lost habitats (albeit that these are likely to be of local rather than national value), or might locate them some distance away from the original beneficiaries of habitats. Nonetheless, offsetting would provide minerals and waste developers with greater flexibility to locate in the best locations. Some negative effects were noted due the burden that this policy may put on new development.

Recommendations Broadly the policy is seen as positive in terms of most SA objectives. However, the uncertainties raised over biodiversity offsetting may benefit

from additional clarification on the circumstances when it would be suitable (i.e. when exceptional circumstances might apply, the offset metrics expected of developers and the geographical scope of its application)⁷⁰. As national guidance is not currently available, this clarification may be best developed either as supporting information to the Joint Plan (e.g. through a Supplementary Planning Document) or could be incorporated when the Joint Plan is reviewed.

⁷⁰ National guidance on biodiversity offsetting has not yet been finalised. Information on the pilot work and consultation work run by Defra is available at <https://www.gov.uk/biodiversity-offsetting>.

Policy D08 - Historic environment

- 1) Minerals or waste development proposals will be permitted where it can be demonstrated that they will conserve and, where practicable, enhance those elements which contribute to the significance of the area's heritage assets including their setting.
- 2) Particular regard will be had to the benefits of conserving those elements which contribute most to the distinctive character and sense of place of the Plan area including:
 - The World Heritage Site at Fountains Abbey/Studley Royal;
 - The historic character and setting of York;
 - The archaeological resource of the Vale of Pickering, the Yorkshire Wolds, the North York Moors and Tabular Hills, and the Southern Magnesian Limestone Ridge.
- 3) Proposals that would result in less than substantial harm to the significance of a designated heritage asset (or an undesignated archaeological site of national importance) will be permitted only where this is outweighed by the public benefits of the proposal. Where proposals would lead to substantial harm to or total loss of the significance of a designated heritage asset (or an undesignated archaeological site of national importance), planning permission will be refused unless it can be shown that the substantial harm or loss is necessary to achieve substantial public benefits that outweigh the harm or loss, or all of the following apply:
 - i) The nature of the heritage asset prevents all reasonable uses of the site; and
 - ii) No viable use of the heritage asset itself can be found in the medium term through appropriate marketing that will enable its conservation; and
 - iii) Conservation by grant funding or some form of charitable or public ownership is demonstrably not possible; and
 - iv) The harm or loss is outweighed by the benefit of bringing the site back into use.

Proposals affecting an archaeological site of less than national importance will be permitted where they would conserve those elements which contribute to its significance in line with the importance of the remains. In those cases where development affecting such sites is acceptable in principle, mitigation of damage will be ensured through preservation of the remains in situ as a preferred solution. When in situ preservation is not justified, adequate provision should be made for excavation and recording and subsequent analysis, publication and archive deposition before or during development.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					No clear link.
2.	0	0	0					No clear link.
3.	0	0	0					No clear link.

4.	0	0	0				No clear link.
5.	0	0	0				No clear link.
6.	0	0	0				No clear link.
7.	0	0	0				No clear link.
8.	?	?	?				<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Considerations for the historic environment may restrict the locations available for minerals and waste development should the most suitable places also coincide with areas of importance (this may particularly be the case around the city of York). This may increase resource use in some cases (e.g. where a location for a waste site that would move waste up the waste hierarchy is ruled out) or it may decrease it (e.g. where quarrying is restricted) However, this is location specific and therefore the effects are currently highly uncertain.</p>
9.	?	?	?	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As with SA objective 8, considerations for the historic environment may restrict the locations available for waste management should the most suitable places also coincide with areas of importance, particularly around York. This is location specific and therefore the effects are currently negative to uncertain.</p>
	-	-	-				
10.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would result in a major direct positive impact upon this objective as development will only be permitted where it will conserve and, where appropriate, enhance the historic environment. Developments that would result in harm to designated heritage assets (or archaeological sites of national importance) would only be allowed where harm is outweighed by the public benefits of the proposal. Particular regard is given to the most significant resources and locations including the City of York, Fountains Abbey/Studley Royal World Heritage Site and significant archaeological resources.</p>
	+	+	+				
11.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>
	+	+	+				

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy is likely to have a positive impact on landscapes and townscapes as conserving and enhancing heritage assets and their setting will also protect and enhance landscape and townscape character as heritage assets are an integral part of the landscape/townscape.
12.	-	-	-	✓			✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The option may have a negative effect should it lead to the prevention of a particular development, however overall the conservation and enhancement of the historic environment is integral the provision of an environment which is attractive for investors and may have positive effects in this respect.
	+	+	+				
13.	+	+	+	✓			✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Conserving heritage assets and where practicable delivering enhancements to their setting may result in positive effects on this objective as it may provide opportunities to boost tourism (i.e. in the City of York and at other heritage assets which are also tourist destinations such as Fountains Abbey). This may also support the creation of new jobs.
14.	+	+	+	✓			✓ <u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The Special Qualities of the North York Moors National Park includes archaeology, locally distinctive buildings and building materials and therefore protecting and enhancing historic assets in the National Park will have positive effects on providing opportunities for understanding and enjoying the Park (the second statutory purpose). Elsewhere, there are likely to be similar benefits where the recreational/learning experience is supported by the presence of historic assets.
15.	0	0	0				No clear link.
16.	0	0	0				No clear link.

17.	-	-	-	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Protecting historic assets may have a negative effect on this objective should it result in minerals developments not coming forward, leading to a lack of materials for development and other uses.</p>

Summary of assessment This Policy would have particularly strong positive impacts in relation to the historic environment and landscape objectives. The Policy would conserve and where appropriate enhance the historic environment and affords particular protection for the most significant historic assets within the Plan area. Positive impacts are also likely to result in relation to tourism, recreation, community viability and vitality and the economy as this policy may boost tourism and conserve and enhance the special qualities of the National Park. Some negative impacts may result particularly in relation to the economy and meeting the needs of a changing population should this policy result in prevention of minerals and waste development due to historic environment considerations.

Recommendations None noted.

Policy D09 - Water environment

- 1) Proposals for minerals and waste development will be permitted where it can be demonstrated that no unacceptable impacts will arise, taking into account any proposed mitigation, on surface or groundwater quality and/or surface or groundwater supplies and flows.
- 2) In relation to surface and groundwater quality and flows, a very high level of protection will be applied to principal aquifers and groundwater Source Protection Zones. Development which would lead to an unacceptable risk of pollution, or harmful disturbance to groundwater flow, will not be permitted.
- 3) Permission for minerals and waste development on sites not allocated in the Joint Plan will, where relevant, be determined in accordance with the Sequential Test and Exception Test for flood risk set out in national policy. Development which would lead to an unacceptable risk of, or be at an unacceptable risk from, all sources of flooding (i.e. surface and groundwater flooding and groundwater flooding from rivers and coastal waters) will not be permitted.
- 4) Proposals for minerals and waste development should, where necessary or practicable taking into account the scale, nature and location of the development proposed, include measures to contribute to flood alleviation and other climate change mitigation and adaptation measures including use of sustainable urban drainage systems.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

							<p><u>Plan level / regional / wider effects</u> This policy would protect water resources from unacceptable impacts on water quality. It also avoids unacceptable adverse effects of flooding. While 'unacceptable impacts' is not clearly defined this will significantly benefit aquatic / riparian biodiversity.</p> <p>The SA sub objectives would suggest that an increasingly important benchmark of acceptability would be that water quality status objectives (which include ecological water quality objectives) outlined in River Basin Management Plans should not be prevented from being achieved. However, in most cases this will be controlled by other regulatory regimes and is referred to in the supporting text to the policy.</p> <p>The encouragement of SuDs in this policy is also likely to benefit this objective, given that SUDS utilise natural features in drainage.</p>
2.	+	+	+	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option would protect water resources from unacceptable impacts on water quality / supplies and flows. While 'unacceptable impacts' is not clearly defined this will significantly benefit water quality / supplies.</p> <p>The SA sub objectives would suggest that an increasingly important benchmark of acceptability would be that water quality status objectives outlined in River Basin Management Plans should not be prevented from being achieved. In most cases this will be controlled by other regulatory regimes and is referred to in the supporting text to the policy.</p> <p>The encouragement of SuDS in this policy is also likely to benefit this objective.</p>
3.	0	0	0				<p><u>Local Effects</u> No clear link</p> <p><u>Plan level / regional / wider effects</u> No clear link</p>

4.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
5.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
6.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The policy refers to climate change mitigation. While climate change mitigation usually refers to efforts to reduce the magnitude of climate change, either through directly reducing greenhouse gases or through the use of carbon sinks ⁷¹ it is considered that there may be minor benefits that could be achieved through this objective. For instance, through wetland habitats that act as carbon sinks but also store flood water (climate adaptation).
7.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy protects surface and groundwater from unacceptable effects and includes impact on groundwater and surface water flooding. All of these things are vulnerable to climate change, so the policy can be seen to make a significant contribution to the response to climate change.
8.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link
9.	0	0	0					<u>Local Effects</u> No clear link

⁷¹See UNEP, undated. Climate Change Mitigation or BBC, 2014. What is climate change mitigation? [URL: <http://www.bbc.co.uk/news/science-environment-26980837>]

									<u>Plan level / regional / wider effects</u> No clear link
10.	0	0	0						<u>Local Effects</u> No clear link
									<u>Plan level / regional / wider effects</u> No clear link
11.	0	0	0						<u>Local Effects</u> No clear link
									<u>Plan level / regional / wider effects</u> No clear link
12.	+	+	+	✓		✓			<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+						<u>Plan level / regional / wider effects</u> A clean and steady water supply is an essential requirement for many businesses that operate in the Plan area, including many recreation businesses, farming and industries that extract water. Reduced flood risk is also important to continued business success. This approach would provide strong support for this.
13.	+	+	+	✓		✓			<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
	+	+	+						<u>Plan level / regional / wider effects</u> Waterways are at the heart of many communities. This approach will protect them. This approach would also help protect communities from flooding. This will contribute significantly to sustained community vitality.
14.	+	+	+	✓		✓			<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.
									<u>Plan level / regional / wider effects</u> A clean and steady water supply is an essential requirement for many recreational activities that take place in the Plan area. This approach would support this.
15.	+	+	+	✓	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together
	+	+	+						

								with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> A clean and steady water supply is an essential prerequisite of several aspects of health and wellbeing. And reduced flood risk is of key importance to safety in many communities. This approach would strongly support this.
16.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This approach considers impacts on flooding and supports the sequential approach which strongly supports this objective. It also supports consideration of the potential for flood alleviation and SuDS.
17.	+	+	+	✓	✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> A clean and steady supply of water would help meet the needs of the population

Summary of assessment This is a generally positive development management policy, with benefits to biodiversity, water, climate change mitigation and adaptation, the economy, community vitality, recreation, health and wellbeing and a changing population. It will work well alongside the environmental permitting and water licensing regimes. The Policy is also supported by supporting text referring to the importance of not impeding the achievement of water status objectives (which is important in meeting obligations under the Water Framework Directive).

Recommendations None noted.

Policy D10 - Reclamation and afteruse

Part 1)

Proposals which require restoration and afteruse elements will be permitted where it can be demonstrated that they would be carried out to a high standard and, where appropriate to the scale and location of the development, have demonstrably:

- i) Been brought forward following discussion with local communities and other relevant stakeholders and, where practicable, the proposals reflect the outcome of those discussions;
- ii) Taken into account the location and context of the site, including the implications of other significant permitted or proposed development in the area and the range of environmental and other assets and infrastructure that may be affected, including any important interactions between those assets and infrastructure;
- iii) Reflected the potential for the proposed restoration and/or afteruse to give rise to positive and adverse impacts, including cumulative impacts, and have sought where practicable to maximise potential overall benefits and minimise overall adverse impacts;
- iv) Taken into account potential impacts on and from climate change factors;
- v) Made best use of onsite materials for reclamation purposes and only rely on imported waste where essential to deliver a high standard of reclamation;
- vi) Provided for progressive, phased restoration where appropriate, providing for the restoration of the site at the earliest opportunity in accordance with an agreed timescale;
- vii) Provided for the longer term implementation and management of the agreed form of restoration and afteruse (except in cases of agriculture or forestry afteruses where a statutory 5 year maximum aftercare period will apply).

Part 2)

In addition to the criteria in Part 1) above, proposals will be permitted which deliver a more targeted approach to minerals site restoration and afteruse by contributing towards objectives, appropriate to the nature, scale and location of the site, including where relevant:

- i) In areas of best and most versatile agricultural land, prioritising the protection and enhancement of soils and the long term potential to create areas of best and most versatile land during reclamation of the site;
- ii) Where opportunities allow, particularly for sand and gravel extraction in the flood plains of the rivers Swale and Ure, providing additional flood storage capacity to help to minimise flooding in upstream and downstream locations;
- iii) Within the National Park and AONBs, enhancing the special qualities of the designated area and/or providing opportunities for the enjoyment and understanding of those special qualities;
- iv) Within airfield safeguarding zones, particularly where reclamation for biodiversity is involved, ensuring that reclamation and afteruse proposals respect safeguarding constraints whilst maximising the potential restoration and afteruse benefits delivered by the site;
- v) In proximity to important heritage assets, ensuring that the significance of assets and their settings is sustained and where practicable enhanced and, also where practicable, that opportunities to facilitate enjoyment of the asset are provided;
- vi) Where the development is located within or adjacent to identified green infrastructure corridors, reflecting any locally agreed priorities for delivery of additional or enhanced green infrastructure and ecosystems services;
- vii) In proximity to major settlements within and adjacent to the Plan area, and subject to local amenity considerations, providing enhanced opportunities for informal and formal public access and recreation;
- viii) Promoting the delivery of significant net gains for biodiversity and the establishment of a coherent and resilient ecological network, based on contributing,

where practicable, towards established objectives including the creation of Biodiversity Action Plan habitats, and seeking to deliver benefits at a landscape scale;
 ix) Creating geodiversity benefits where appropriate including contributing towards the delivery of priorities identified in any relevant Geodiversity Action Plan.

SA Objective Key: 1. Biodiversity/Geo-diversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part two of the policy encourages proposals to contribute to a number of objectives (dependent on the location of the site) via restoration schemes including, contributing towards the delivery of additional or enhanced green infrastructure and ecosystem services, delivering enhancements for biodiversity, improvements to habitat networks and the connectivity between these, including the creation of Biodiversity Action Plan habitats, and creating geo-diversity benefits including contributing towards the delivery of priorities identified in any relevant Geo-diversity Action Plan. This policy will therefore have a major positive impact against the biodiversity/geo-diversity objective.</p>
2.	+	+	+	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy requires consideration to be given to implications for environmental assets, which could include the water environment, and will therefore have a positive effect against this objective.</p>

3.	+	+	+		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy requires on-site materials to be used where possible and would therefore reduce the need for transportation as part of the reclamation process. Additionally, providing opportunities for recreation close to major settlements could help to reduce the need to travel to access leisure facilities.</p>
4.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy requires consideration to be given to implications for environmental assets, which could include air quality, and would therefore have a positive effect against this objective.</p>
5.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy will have strong positive effects on this objective by requiring reclamation schemes to protect and enhance soils and agricultural land in areas of best and most versatile agricultural land and consider the long term potential to create areas of best and most versatile land during reclamation of a site.</p>
6.	+	+	m +	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The policy requires schemes for reclamation and after-use to take into account potential impacts on climate change. Effects may be greater over time as more sites are restored.</p>
7.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>

							with plan level effects below as they could happen across a broad distribution.
							<p><u>Plan level / regional / wider effects</u> The policy requires schemes for reclamation and after-use to take into account potential impacts from climate change. Part 2 of the policy identifies specific areas where increasing flood storage capacity may be particularly beneficial and will therefore have a positive effect on this objective, bearing in mind increased flooding is a predicted effect of climate change.</p>
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Through encouraging the use of on-site materials above the importation of waste, this policy would to some degree help with reducing the use of materials and encouraging the re-use of materials as it would reduce the opportunities to landfill waste (which may, though this is uncertain, drive demand to find a beneficial use for it)</p>
	?	?	?				
9.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Through encouraging the use of on-site materials above the importation of waste, this policy effectively discourages the landfilling of waste (a method of waste management at the bottom of the waste hierarchy). Given there are limited other disposal opportunities for the type of inert waste likely to be used in restoration, this policy may indirectly drive the management of that waste up the waste hierarchy to some uncertain degree.</p>
	?	?	?				
10.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part one of this policy requires consideration to be given to effects on environmental assets, which could include the historic environment. Part two of the policy requires sites in proximity to important heritage assets to ensure that the significance of assets and their settings are sustained and where practicable enhanced, and that opportunities to facilitate enjoyment of the asset are provided where practicable. This policy is therefore considered to have a major positive impact on the historic environment objective.</p>
	+	+	+				
11.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

	+	+	+					<p><u>Plan level / regional / wider effects</u> Part one of this policy requires consideration to be given to effects on environmental assets, which could include the landscape/townscape. Part 2 of the policy requires that within the National Park and AONBs, reclamation and after-use should aim to enhance the special qualities of the designated area and/or provide opportunities for the enjoyment and understanding of those special qualities. It is considered that the policy could be strengthened by specifically referring to landscape enhancements outside of the designated areas also. Impacts are considered to be minor positive for those areas outside of the National Park and AONB's and major positive for areas within the landscape designations.</p>
12.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy may result in some indirect positive impacts on the economy through improved recreation opportunities, improved enjoyment of historic assets, and improved opportunity for enjoyment of the National Park and AONBs which may all boost tourism in the Plan area. An element of uncertainty has also been recorded in relation to this objective as it is considered that requirements for restoration and after-use may in some cases impact upon the viability of a project.</p>
	?	?	?					
13.	+	+	+	✓			✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> As stated under objective 12, this policy may lead to a boost in tourism resulting in minor positive impacts in relation to this objective.</p>
14.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy is likely to lead to a range of benefits for recreation including those relating to enhancing the special qualities of National Parks and AONBs and providing opportunities for their enjoyment, enhanced green infrastructure corridors, and the provision of enhanced opportunities for informal and formal public access and recreation. The range of recreation opportunities provided is likely to increase in extent over time.</p>
15.	m	m	+	✓		✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together</p>
	+	+	+					

							with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy will enable considerations related to the wellbeing of the community to be taken into account by requiring schemes to be developed through discussion with local communities. The provision of recreation opportunities will also provide health and wellbeing benefits for local communities. The extent of these will increase over time.
16.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Part 2 of this policy identifies specific areas where increasing flood storage capacity may be particularly beneficial and will therefore have a positive effect on this objective.
17.	+	+	+	✓		✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy would contribute towards the sub-objectives 'to enable development and wider activity to meet the needs of the population' and 'to enable the community to contribute to and have influence in decision making' by requiring that reclamation and after-use plans have been brought forward in discussion with local communities and other relevant stakeholders and where practicable reflect the outcome of those discussions. Major positive impacts are therefore considered likely in relation to this objective.

Summary of assessment This Policy is likely to result in largely positive impacts with particularly strong positive effects recorded in relation to biodiversity, land use, climate change adaptation, historic environment, flood risk and meeting the needs of a changing population due to the wide range of considerations promoted by the Policy. Some uncertainties were noted in relation to the material resources and waste management objectives as the preference for using onsite materials for reclamation purposes could reduce the opportunities for disposing of inert wastes, which would represent a positive effect, though the magnitude of that effect is highly uncertain.

Recommendations This policy is considered to be largely positive and no mitigation is proposed.

Policy D11 - Sustainable design, construction and operation of development

Part 1)

Proposals for minerals and waste development will be permitted where it has been demonstrated that measures appropriate and proportionate to the scale and nature of the development have been incorporated in its design, construction and operation in relation to:

- i) Minimisation of greenhouse gas emissions by incorporating energy-efficient siting, design and operational practices including those relating to bulk transport of materials;
- ii) Minimisation of waste generated by new minerals and waste development;
- iii) Generation and utilisation of renewable or low carbon energy where practicable and in a manner appropriate to the character and location of the development;
- iv) Minimisation of water consumption by incorporating water efficiency measures including, where practicable, the re-use of waste water arising from the development;
- v) Measures to minimise flood risk associated with the development including use of Sustainable Drainage Systems and permeable surfacing;
- vi) A requirement for the relevant built or civil engineering elements of new minerals and waste developments in excess of 1000m² floor space to meet a minimum 'Very Good' BREEAM or CEEQUAL standard as appropriate;
- vii) For energy-from-waste development, the efficient generation of energy including, for development with the potential to generate combined heat and power, the beneficial use of heat either on site or incorporating measures to enable provision of heat to other existing or proposed development in the vicinity of the site;
- viii) Implementation of landscape planting comprising native species able to successfully adapt to climate change and, where practicable, incorporating areas of new wildlife habitat that would help to improve habitat connectivity;
- ix) Mitigation of the impacts on the development arising from any predicted mining subsidence or land instability;
- x) For minerals workings and mineral working deposits, consideration of tip and quarry slope stability, the impacts of any dewatering activity and incorporating appropriate mitigation in the design of tips and slopes to minimise any hazard to people and property.

Proposals for substantial new minerals extraction and for the large-scale treatment, recovery or disposal of waste should be accompanied by a climate change assessment showing how the proposals have taken into account impacts from climate change and include appropriate mitigation measures where necessary.

Part 2)

Proposals for new built development should demonstrate how the development would be designed, constructed and operated in order to:

- i) Minimise waste generated during construction of the development, and incorporate measures to encourage or facilitate the re-use and recovery of any waste generated during construction of the development;
- ii) Incorporate appropriate space to enable waste arising during use of the development to be separated and stored prior to being collected for recycling or re-use;
- iii) Use sustainable construction materials where practicable, including use of alternatives to primary land-won aggregate.

SA Objective Key: 1. Biodiversity/Geo-diversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	m +	m +	m +	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The demonstration through this policy of how a site has supported native landscape planting and/or areas of new wildlife habitat throughout the lifecycle of the site should have positive effects for biodiversity. The significance of these effects would be a function of the scale at which these measures are implemented considered against any harm which may occur as a result of the development.</p> <p>Indirectly too, the policy would be beneficial, as sustainable design is likely to reduce the materials, carbon and water footprints of minerals and waste development, which will benefit the flora and fauna of other locations affected by the resources consumed and disposed of by the development (for example the energy used by a development may drive a demand for energy minerals extraction elsewhere at the expense of distant habitats, and may also generate carbon which has a global impact on species sensitive to climate change).</p>
2.	m +	m +	m +	✓		✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would seek demonstration that any development minimises water consumption through efficiency and re-use and requires consideration of impacts of dewatering (which would operate in combination with other development management policies, particularly DO9). This policy is predicted to have a moderate positive impact in relation to this objective (the moderate positive is awarded because while water can be minimised, the nature of minerals and waste development is likely to mean that significant water consumption is still likely to occur) .</p>

3.	m +	m +	m +	✓	✓	✓	<p><u>Local Effects</u></p> <p><u>Plan level / regional / wider effects</u> This policy, as it promotes BREEAM and minimising greenhouse gases through bulk transport of minerals, would have a moderate benefit on this objective (and would work in combination with the 'transport' policy D03).</p>
4.	+	+	+	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This option is likely to have indirect impacts on air quality through ensuring that design of the site minimises greenhouse gas emissions through the incorporation of energy efficient siting, reducing impacts from transport ,design and operation and through the generation and utilisation of renewable or low carbon energy.</p>
5.	m +	m +	m +	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Efficient siting and design of a site implemented through the criteria set out in this policy may help to reduce the amount of land taken up by minerals and waste development. There is also likely to be an indirect benefit of reduced land take from the reduced materials footprint promoted through schemes like BREEAM. Moderate positive.</p>
6.	+	+	+	✓	✓	✓	<p><u>Local Effects</u></p> <p>Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> All the criteria set out in this policy will have a positive effect on climate change directly or indirectly through requiring</p>

							<p>demonstration of minimising the causes of climate change such as greenhouse gas emissions, through efficient design and operation of new developments, and through the use of renewable energy technologies. In addition, new proposals would need to demonstrate through a climate change assessment how the proposals have taken this into account, including appropriate mitigation measures. This is likely to have a positive effect, particularly cumulatively across the Plan area in the long-term. This has the potential to be significantly positive but this is dependent upon the balance of net harm resulting from the development itself against the measures put in place to mitigate any effects. .</p> <p>It should be noted that most new minerals development is likely to cause the current carbon baseline to deteriorate, whatever actions are taken to reduce its carbon footprint. However, if a dynamic evolving baseline is considered the policy would improve the situation.</p>
7.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> The criteria set out in this policy relating to flood risk and drainage, renewable energy, water consumption and native planting, incorporation of new wildlife habitat to help to improve habitat connectivity as well as building to BREEAM standards would help contribute to climate change adaptation by minimising a site's effect on the environment throughout the lifecycle of the site and through building in resilience to some key climate change impacts.</p>
8.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> This policy would not influence the amount of minerals to be extracted but it does encourage any buildings or operations on the site to minimise the amount of energy and resources consumed through onsite energy generation or the use of renewable energy. This policy advocates a sustainable approach to resources by supporting their re-use and recycling as well the use of sustainable materials where practicable. Overall, it is considered that a minor positive impact would result in relation to this objective.</p>
9.	+	+	+	✓		✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<p><u>Plan level / regional / wider effects</u> This policy includes criteria that are directly relevant to reducing waste through advocating the implementation of measures to reduce waste generated and encouraging/facilitating its re-use and recovery during construction. In addition, it also supports waste being sorted and stored prior to it being re-used or recycled. Part one of the policy also promotes the re-use of waste water where practicable and the recovery and onsite use of energy generated by the development. It is considered that this would result in a major positive impact in relation to this objective.</p>
10.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part one of this policy promotes high quality design and landscaping which may have a positive impact or at least minimise/neutralise negative impacts in relation to the historic environment. The strong focus of this policy on reducing climate change/flooding may have some positive impacts on heritage assets in the Plan area that are at risk from flooding or other climate change related impacts. Part two of the policy encourages 'incorporation of appropriate space to enable waste arising during the use of the development to be separated and stored prior to being collected for recycling or re-used'. Impacts in relation to this element of the policy will depend upon the location and scale of additional development/space required, though are likely to be mitigated by the historic environment policy (D08).</p>
11.	+	+	+	✓	✓	✓		<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Part one of this policy promotes high quality design and landscaping which may have a positive impact or at least minimise/neutralise negative impacts in relation to landscape/townscape. Part two of the policy encourages 'incorporation of appropriate space to enable waste arising during the use of the development to be separated and stored prior to being collected for recycling or re-used'. Landscape/townscape impacts in relation to this element of the policy will depend upon the location and scale of additional development/space required, though are likely to be mitigated by the landscape policy (D06). It would be beneficial to refer to policy D06 in the 'key links to other relevant policies and objectives' box.</p>
12.	?	?	?		✓	✓	✓	<p><u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p>

								<u>Plan level / regional / wider effects</u> Sustainable design and construction should prove to be cost effective in operational terms through implementing measures which help with long-term cost saving, although it is acknowledged that the implementation of a highly sustainable site/facility may prove costly. Re-using materials is likely to save money where it is practicable. However, supporting the sorting and storage of waste on site may have both costs and benefits through enabling waste to be recovered for other uses but also potentially negative effects in terms of the timescales for development and costs for additional land. The impact of this policy in relation to the economy is likely to be dependent upon the type of facility and its location. Impacts are therefore recorded as uncertain.
13.	0	0	0					<u>Local Effects</u> There are no clear links between this policy and the objective for local communities. <u>Plan level / regional / wider effects</u> There are no clear links between this policy and the objective for local communities.
14.	0	0	0					<u>Local Effects</u> There are no clear links between this policy and the objective for recreation and leisure. <u>Plan level / regional / wider effects</u> There are no clear links between this policy and the objective for recreation and leisure.
15.	+	+	+		✓	✓	✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> The design of the facility can influence the health of workers and surrounding communities through reduction of noise, odour and emissions. By minimising greenhouse gas emissions this is likely to have a positive localised effect by also minimising impacts on air quality. Part one of the policy also requires consideration of tip and quarry slope stability in order to minimise any hazard to people and property. The storage of waste encouraged in part 2 of this policy may conflict with minimising the effects of odour and visual impacts although this will be dependent upon location, and to an extent is mitigated by other development management policies. Any construction noise should be temporary. Minor positive and minor negative impacts are therefore recorded under this objective.
16.	m +	m +	m +	✓	✓	✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

								<u>Plan level / regional / wider effects</u> Part 1 of this policy requires the implementation of measures to minimise flood risk including use of Sustainable Drainage Systems and permeable surfacing. The policy also requires a climate change assessment for substantial new minerals and waste sites and flood risk is likely to form part of this assessment. Overall this policy is considered to have a positive impact in terms of minimising flood risk and reducing the impact of flooding.
17.	0	0	0					<u>Local Effects</u> There is no clear link between this policy and the objective for meeting the community's needs <u>Plan level / regional / wider effects</u> There is no clear link between this policy and the objective for meeting the community's needs.

Summary of assessment It is considered that this Policy would have an overall positive effect on achieving sustainable design, construction and operation of developments. The Policy performs positively against most SA objectives, particularly those relating to air quality, climate change and flooding. Some areas of uncertainty have been highlighted including in relation to objective 12 (economic growth) as the costs associated with developing a site are likely to increase given the requirement for high standards of sustainable design and construction and additional mitigation where required.. These additional costs would be balanced with the gains that are likely to accrue through low running costs due to the energy efficiency of any development and cost reduction through re-using resources. However, this will vary depending on the site.

Recommendations This policy is largely very positive and no mitigation is proposed.

Policy D12 - Protection of agricultural land and soils

Best and Most Versatile agricultural land will be protected from unnecessary and irreversible loss. Where development of best and most versatile agricultural land is justified proposals should prioritise the protection and enhancement of soils and the long term potential to recreate areas of best and most versatile land. Where relevant, development will be subject to aftercare requirements to ensure that a high standard of agricultural restoration can be achieved.

Development proposals will be required to demonstrate that all practicable steps will be taken to conserve and manage on-site soil resources, including soils with environmental value, in a sustainable way. Development which would disturb or damage soils of high environmental value such as peat or other soil contributing to ecological connectivity or carbon storage will not be permitted.

SA Objective Key: 1. Biodiversity/Geo-diversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Protecting best and most versatile land would have a mixture of effects on biodiversity. For instance, farmland birds and soil biodiversity would clearly benefit from the retention of such land and from restored agricultural land. On the other hand minerals sites where the soil has been removed are often of long term benefit to flora (for example, where limestone is left is exposed or close to the surface) or of benefit to birds (where new shallow wetlands are formed) and may be of benefit to geo-diversity through the exposing of new faces.</p> <p>The policy specifically protects soils contributing to ecological connectivity, which would be highly beneficial.</p>
2.	+	+	+	✓	✓	✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Protecting soils helps filter water of many pollutants before it reaches the water table. However, sometimes the farming that takes place on BMV land may overload soils with nitrogen, so supporting soils may just prolong negative effects in Nitrate Vulnerable Zones. However quarrying removes the natural protection afforded to groundwater through soils – so in contrast to quarrying the effect is positive.
3.	0	0	0				No clear link
4.	0	0	0				<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Although retaining soils may lead to some dust effects this is thought to be insignificant at a plan level.
5.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Clearly protecting soils or requiring that they should be retained will have clear benefits for the soils objective.
6.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Soils play an important role in sequestering CO ₂ . While BMV land encompasses soils that may be less rich in organic matter (which is a key store of carbon in soils), such as sandy soils, it also encompasses clay soils and even some peat soil, which tend to be carbon rich. All soils confer some benefit. However, the policy explicitly states that development which would disturb soils such as peat that contribute to carbon storage will not be permitted. This is highly positive.
7.	+	+	+				<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan

							level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Climate change is expected to negatively affect global food production and security ⁷² , so the more that UK agricultural soils are conserved, the more resilient food supplies will be. Soils also help prevent flooding.
8.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Soil is an important resource in itself. This reduces the need to intensify food production elsewhere.
9.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy seeks to conserve soils so will reduce waste soils.
10.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Indirectly this policy will help retain the setting to historic assets by either retaining farmland (which may or may not be in keeping with historic character, though will at least maintain the historic topography) or seeking to restore it rather than creating a whole new environment through a restoration to low levels.
11.	+	+	+	✓		✓	<u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This policy will help maintain existing character by keeping farming in place, or will restore a core component of that character if soils are retained for restoration or otherwise preserved.

⁷² The Intergovernmental Panel on Climate Change has done extensive work in this area. The Intergovernmental Panel on Climate Change has concluded that risks are already 'medium' and will increase substantially in the near term (IPCC, 2014. Climate Change 2014: Impacts, Adaptation and Vulnerability: Summary for Policymakers [URL: http://www.ipcc.ch/pdf/assessment-report/ar5/wg2/ar5_wgII_spm_en.pdf]

12.	m +	m +	m +	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Best and Most Versatile Land not only supports jobs in farming; it underpins the production of food – which is a major component of the British economy. It may also indirectly maintain character, which helps boost tourism. It may however prevent some quarrying and the jobs and value associated with that, though it may simply direct it to more suitable areas. Moderate positive, with some minor negative effects.</p>
13.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Farming is an important feature of many rural communities – providing jobs, boosting tourism and in some cases supporting local shops. This policy will help protect productive farming.</p>
14.	+	+	+	✓			✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Conserving soils is a key part of conserving rural character – which in turn supports a wide range of recreational pursuits such as walking and cycling and horse riding. However, in the long term quarry restorations can also create recreational resources such as new accessible green infrastructure, so this policy may favour restoration of farmland rather than accessible land.</p>
15.	+	+	+	✓		✓	✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Soils support wellbeing and health through providing a range of services such as flood protection, food provision and, through underpinning an attractive countryside, recreational enjoyment. However, in the long term quarry restorations can also create recreational resources such as new green infrastructure which may be an accessible resource for healthy recreation. This policy may favour restoration of farmland rather than accessible land.</p>
16.	+	+	+	✓		✓		<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan</p>

			-				<p>level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> Protecting soils is important for preventing flooding as water may settle and slowly percolate through it. This is particularly the case for best and most versatile land, which often coincides with floodplains. Quarries can also often provide flood storage in the long term (which may be of greater benefit than agricultural land); though during their operational lives they are unlikely to confer the same level of benefit as soils.</p>
17.	+	+	+	✓		✓	<p><u>Local Effects</u> Although effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.</p> <p><u>Plan level / regional / wider effects</u> An increasing population needs affordable food. Conserving or reinstating soils is a key step in creating affordable food.</p>

Summary of assessment This Policy will help towards the sustainable conservation of our most important soil resources. It performs positively against most SA objectives, particularly those relating to protecting soils and land, adapting to climate change, protecting landscapes and supporting a changing population's needs. While some mixed outcomes may be expected in the long term when the benefits of low level quarry restoration are considered (i.e. for the biodiversity, recreation and health objectives) these are minor exceptions to a broadly very positive assessment. Mixed effects are also observed in relation to the sustainable economy objective, as the policy may prove restrictive to some development. However, there are also key economic benefits from conserving soils, which underpin the agricultural and food retail economies.

Recommendations This policy is highly positive and further mitigation is not noted.

Policy D13- Consideration of applications in Development High Risk Areas

Where development, other than exempt development as defined in the Development High Risk Exemptions list, is proposed within Development High Risk Areas identified by the Coal Authority, proposals should be accompanied by a Coal Mining Risk Assessment and where necessary incorporate suitable mitigation measures in relation to land stability. Permission will be granted where it can be demonstrated, through the Coal Mining Risk Assessment, that the development will not be at unacceptable risk.

SA Objective Key: 1. Biodiversity/Geodiversity, 2. Water Quality/Quantity, 3. Transport, 4. Air Quality, 5. Soil/Land, 6. Reduce Climate Change, 7. Adapt to Climate Change, 8. Minimise Resource Use, 9. Minimise Waste, 10. Historic Environment, 11. Landscape, 12. Economic Growth, 13. Community Vitality, 14. Recreation, Leisure and Learning, 15. Wellbeing, Health and Safety, 16. Flooding, 17. Changing Population Needs

SA objective	Impact / timescale			Type of effect				Analysis
	S	M	L	P	T	D	I	
1.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> No clear link.
2.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> No clear link.
3.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> No clear link.
4.	0	0	0					<u>Local Effects</u> No clear link. <u>Plan level / regional / wider effects</u> No clear link.
5.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution.

								<u>Plan level / regional / wider effects</u> This option will help ensure that appropriate development will be undertaken on land where there may be uncertainty over land stability, which ultimately will prevent future impairment of land value.
6.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
7.	+	+	+					<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Land instability may be affected by climate change, e.g. through weather related shrink-swell affecting clays ⁷³ , so there may (or may not) be a synergistic risk between coal mining related subsidence and climate change related subsidence. This option would reduce this synergistic effect if it occurs by minimising risks from coal mining.
8.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
9.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
10.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
11.	0	0	0					<u>Local Effects</u> No clear link

⁷³ See British Geological Survey, 2013. Shrink-swell and climate change [URL: bgs.ac.uk/science/landUseAndDevelopment/shallow_gehazards/shrinkSwellClimateChange.html - URL is no longer available.]

								<u>Plan level / regional / wider effects</u> No clear link.
12.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
13.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
14.	0	0	0					<u>Local Effects</u> No clear link <u>Plan level / regional / wider effects</u> No clear link.
15.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option is likely to have beneficial effects by ensuring that built development is less prone to land instability, which should reduce levels of stress, increase safety and ensure that properties maintain value.
16.	+	+	+	✓			✓	<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> Subsidence can exacerbate the risk of flooding by forming hollows in the ground or lowering the level of a defence. Investigation of the risk of subsidence should allow more informed flood risk assessments.
17.	+	+	+	✓		✓		<u>Local Effects</u> Although individual effects could happen at a local scale, this is a strategic policy so local effects are considered together with plan level effects below as they could happen across a broad distribution. <u>Plan level / regional / wider effects</u> This option is likely to have small scale beneficial effects by ensuring that built development is less prone to land instability, thus ensuring that building / development life is maintained, and reducing the rate of turnover of development.

Summary of assessment There are unlikely to be widespread effects as a result of this Policy, however, there are some small scale positive effects on soil / land, climate change adaptation, health and wellbeing, flood risk and meeting the needs of the population. This is because the Policy is likely to ensure that development is less prone to land instability impacts (such as subsidence) which can impact on the aforementioned objectives.

Recommendations No further mitigation is proposed

Appendix 3 – Assessment of Sites is in a separate document

Sustainability Appraisal Report

Appendix 4: Sustainability Appraisal Contribution to the Evolution of the Vision

Approach to Appraising the Vision

The Plan's vision and objectives will set the overall direction of the Plan and the framework for the policies in the Plan and it is therefore important that these are assessed at the outset of Plan production to ensure that any sustainability effects can be identified and addressed at the strategic level.

When we consulted on a sustainability appraisal at the Issues and Options stage of Plan preparation we carried out an initial assessment of the draft vision and objectives. This was updated following consultation on the SA findings and further revised to present an up to date appraisal of the vision at the preferred options stage of plan production.

Following these earlier appraisals we have further updated this appraisal to reflect the version of the vision in the draft Plan.

The vision has been assessed as a whole against the SA framework, taking into account the fact that the vision is high-level and would not be expected to contain the level of detail that may be expected within options or policies. The assessment has been undertaken using the matrix in the Scoping Report. However, due to the high level nature of the vision we have simply recorded if the vision is likely to have broadly positive or negative effects. While we have considered direct and indirect effects where relevant, we have not considered other types of effects (e.g. cumulative effects, the temporal nature of effects etc.).

Vision Appraisal

The Vision and Priorities as presented at the Preferred Option Stage of Joint Plan development is as follows:

Vision and Priorities

“Over the period to 31 December 2030 the Plan area will move towards the more sustainable provision of minerals and waste infrastructure and services, maintaining a careful balance between meeting future needs whilst protecting and enhancing the Plan area's environment, protecting and supporting its communities and strengthening its economy.

The following interconnected priorities underpin the vision and objectives:

- *Delivering sustainable waste management*
- *Achieving the efficient use of minerals resources*
- *Optimising the spatial distribution of minerals and waste development*
- *Protecting and enhancing the environment, supporting communities and businesses and mitigating and adapting to climate change.*

Delivering Sustainable Waste Management

- i. Less waste will be generated and the Plan area will have moved substantially closer to a zero waste economy, with more waste being used as a resource and disposal of waste arising in the Plan area only taking place as a last resort. National and local targets for recycling and diversion of waste will, as a minimum, have been met and,*

where practicable, exceeded. Important waste management infrastructure will have been safeguarded for the future and the Plan area will have delivered sufficient waste management capacity to meet needs equivalent to waste arising in North Yorkshire and the City of York, with waste only being exported out of the Plan area where necessary or more sustainable.

Achieving the Efficient Use of Minerals Resources

- ii. Whilst maximising the use of alternatives to primary minerals, the provision of an adequate and steady supply of minerals will have been maintained, recognising the important role the Plan area has in the supply of a range of minerals and in particular recognising the area's role in aggregates provision in the Yorkshire and Humber area and the adjacent North East region. Provision will have also reflected the importance of using local minerals to help to maintain and improve the quality of the area's built environment. Important minerals resources and minerals supply infrastructure will have been safeguarded effectively for the future.*

Optimising the Spatial Distribution of Minerals and Waste Development

- iii. Where geological, environmental and infrastructure considerations allow, opportunities to ensure a good match between locations of minerals supply and demand will have been taken, and appropriately located mineral workings will also be playing a role as locations for the re-use and/or recycling of construction and demolition and excavation waste.*
- iv. For both minerals and waste development, an adequate network of suitably scaled and sustainably located facilities will have been delivered in order to meet requirements identified in the Joint Plan and the distribution of these will reflect the availability of adequate transportation networks, any opportunities for modal shift and the benefits of minimising the overall distance waste and minerals are transported.*
- v. Waste arising in both urban and rural areas will be managed as near to where it arises as practicable, appropriate to the waste stream and scale of arisings, through a network of facilities accessible to local communities and businesses. New waste facilities in both urban and rural locations will, where practicable, have been co-located with complementary industries, businesses and producers or users of waste, in order to maximise the overall efficiency of waste management and the delivery of wider benefits to local businesses and the economy, including from the generation of heat and power through the recovery of waste.*
- vi. In identifying appropriate locations for the delivery of both minerals and waste development the distinguished natural, historic and cultural environment and unique and special landscapes of the Plan area will have been protected, with particular protection afforded to the North York Moors National Park, the Areas of Outstanding Natural Beauty, the historic City of York and the World Heritage Site at Fountains Abbey/Studley Royal*

Protecting and Enhancing the Environment, Supporting Communities and Businesses and Mitigating and Adapting to Climate Change

- vii. Minerals and waste development will be taking place in accordance with the highest practicable standards of design, operation and mitigation throughout the life of the development in order to ensure that the amenity and health of local communities, the sustainability of local businesses and the high-quality environment of the Plan area are given robust protection, including from any adverse cumulative impacts arising*

from development of shale gas resources *Liaison between developers and local communities, businesses, regulators and landowners will have been key in delivering this.*

- viii. *Improved efficiency in energy and resource use, including increased use of alternatives to primary minerals and appropriate design and mitigation to address effects on, and from, climate change, including reducing the carbon footprint associated with minerals and waste and reducing flooding will have occurred, and a high standard of reclamation and afteruse of minerals and waste sites will be being delivered, providing a range of benefits for local communities and the environment of the area, including connecting local access and enhancing biodiversity and ecological networks at a landscape scale where practicable, as well as protecting and restoring high quality agricultural land.”*

The results, shown in the appraisal table below, contain an explanation for the scoring, and include recommendations that the Sustainability Appraisal has made for modifications to the vision. The scoring system we have used in the vision assessment is stated below.

Table 3: Key

Score	Significance
++	There is predicted to be a major positive effect on the baseline and the achievement of the SA objective
m+	There is predicted to be a moderate positive effect on the baseline and the achievement of the SA objective
+	There is predicted to be a minor positive effect on the baseline and the achievement of the SA objective
0	There will be no effect on the baseline and the achievement of the SA objective
-	There is predicted to be a minor negative effect on the baseline and the achievement of the SA objective
m-	There is predicted to be a moderate negative effect on the baseline and the achievement of the SA objective
--	There is predicted to be a major negative effect on the baseline and the achievement of the SA objective
?	The effects on the baseline and the achievement of the SA objective are uncertain

Sustainability Appraisal of the Plan Vision

SA Objective	Impact ¹	Comments / Mitigation
1. Protect and enhance biodiversity and geodiversity and improve habitat connectivity	++	The Vision clearly states that <i>“a high standard of reclamation and afteruse of minerals and waste sites will be being delivered, providing a range of benefits for local communities and the environment of the area, includingenhancing biodiversity and ecological networks at a landscape scale where practicable”</i> The vision will therefore have a strong positive impact

¹ Within this appraisal of the vision, specific direct impacts cannot be identified and so the use of the word impact is intended to communicate that the vision will direct Plan development in a way which positively or negatively contributes to the SA objective.

SA Objective	Impact ¹	Comments / Mitigation
		<p>against this objective.</p> <p>Recommendations at earlier stages. No changes to the vision were recommended in relation to this objective. However, at Issues and Options stage it was stated that the policies of the Plan should ensure that protection is given to biodiversity and geodiversity and support habitat connectivity.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes to the vision were necessary though the suggestion that habitat connectivity be mentioned in policies has now also been incorporated (D07: Biodiversity). <u>No further changes are necessary.</u></p>
2. Enhance or maintain water quality and supply and improve efficiency of water use	+	<p>Whilst lacking specific reference to water quality and supply, paragraph vii does state that <i>'the high-quality environment of the Joint Plan area will be given robust protection'</i> and paragraph vi states that the natural environment will be protected when identifying appropriate locations for minerals and waste developments. The vision will therefore have a positive impact against this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. However, the policies of the Plan should ensure that protection is given to water quality and supply.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, a Development Management Policy D09 'Water Environment' has been included in the Plan. <u>No further changes are necessary.</u></p>
3. Reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	++	<p>Paragraph iv specifically aims for new minerals and waste development to have regard to <i>'an adequate network of suitably scaled and sustainably located facilitiesand the distribution of these will reflect the availability of adequate transportation networks, any opportunities for modal shift and the benefits of minimising the overall distance waste and minerals are transported'</i>. The vision will therefore have a strong, direct positive impact against this objective.</p> <p>Recommendations at earlier stages: No changes to the vision were recommended in relation to this objective.</p> <p>Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary.</u></p>
4. Protect and improve air quality	+	<p>Whilst lacking specific reference to air quality, paragraph vii does state that the high quality environment of the Joint Plan area will be given <i>'robust protection'</i> and paragraph vi states that the natural environment will be protected when identifying</p>

SA Objective	Impact ¹	Comments / Mitigation
		<p>appropriate locations for minerals and waste developments. The vision will therefore have a positive impact against this objective.</p> <p>Recommendations at earlier stages: No changes to the vision were recommended in relation to this objective. However, the policies of the Plan should ensure that protection is given to air quality.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, a preferred policy D02 'Local Amenity and Community Impacts' covers air quality issues. <u>No further changes are necessary.</u></p>
5. Use soil and land efficiently and safeguard or enhance their quality	<p>m+</p> <p>++</p>	<p>Moderate positive to strong positive effect. Paragraph viii refers to protecting and restoring agricultural land through reclamation and afteruse. In addition, the vision refers to maximising the use of alternatives to primary minerals, co-location of waste facilities with complementary industries, and safeguarding infrastructure (which may all indirectly result in less land take). Further, references to protecting the environment may also afford protection to the quality of land and soils. The vision will therefore have an indirect positive impact against this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. However, the policies of the Plan should ensure that protection is given to the most valuable land and soils.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, a preferred policy D12 'Protection of agricultural land and soils' has been incorporated. <u>No further changes are necessary.</u></p>
6. Reduce the causes of climate change	++	<p>Paragraph viii makes specific reference to improving efficiency in energy and resource use and mitigating effects on climate change. Other parts of the vision may have indirect positive effects such as the aim to co-locate developments and minimise the overall distance waste and minerals are transported which would minimise transport emissions. The vision will therefore have direct and indirect positive effects against this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. However, the policies of the Plan should contain further detail about what assets should be protected and how.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, further work through the site assessment process has allowed the opportunity to further review the climate change issues associated with sites, including how to protect assets such as habitats</p>

SA Objective	Impact ¹	Comments / Mitigation
		that act as carbon sinks, or infrastructure that can help deliver sustainable transport, while policy S04: 'Transport Infrastructure Safeguarding' sets out a means for protecting rail and water infrastructure. <u>No further changes are necessary.</u>
7. Respond and adapt to the effects of climate change	++	Paragraph viii refers to addressing the effects from climate change and therefore has a strong, direct positive effect against this objective. Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary at earlier stages and that is still the case.</u>
8. Minimise the use of resources and encourage their re-use and safeguarding	++	Minimisation of use of resources, re-use of resources and safeguarding are all explicitly referred to within the vision. Paragraph i refers to waste being used as a resource and paragraph ii refers to maximising the use of alternatives to primary minerals and safeguarding minerals resources. Paragraph viii refers to efficiency in resource use in design of new development. The vision therefore has a strong direct positive impact on this objective. Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary at earlier stages and that is still the case.</u>
9. Minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	++	Paragraph i refers to less waste being generated, more waste being used as a resource and disposal of waste only taking place as a last resort, and the vision will therefore have a strong, direct positive effect on this objective. Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary at earlier stages and that is still the case.</u>
10. Conserve and enhance the historic environment, heritage assets and their settings	+	Paragraph vi states that the historic environment will be protected when identifying appropriate locations for minerals and waste developments. Whilst lacking specific reference to the historic environment elsewhere in the vision (for instance during restoration), paragraph vii does state that <i>'the environment of the Joint Plan area will be given robust protection'</i> . The vision will therefore have positive effects on this objective. Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. However, the policies of the Plan should ensure that protection is given to the historic environment.

SA Objective	Impact ¹	Comments / Mitigation
		<p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, a preferred policy D08 ‘Historic Environment’ has been incorporated. <u>No further changes are necessary.</u></p>
<p>11. Protect and enhance the quality and character of landscapes and townscapes</p>	<p>+</p>	<p>Paragraph vi states that the natural, historic and cultural environment (which are all components of the landscape and townscapes) and unique and special landscapes will be protected when identifying appropriate locations for minerals and waste developments. Paragraph vii states that <i>‘the high quality environment of the Plan area will be given robust protection’</i> which would include landscape. The vision will therefore have direct positive effects on this objective. The addition of further reference to connecting habitats and restoring agricultural land through restoration is also likely to have indirect benefits.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective. However, the policies of the Plan should ensure that consideration is given to impacts on all landscapes.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, a preferred policy D06 ‘Landscape’ has been incorporated. <u>No further changes are necessary.</u></p>
<p>12. Achieve economic growth and create and support jobs</p>	<p>++</p>	<p>The vision supports the economy of the Plan Area through supporting an adequate and steady supply of minerals, safeguarding minerals for the future and referring to more waste being used as a resource. Paragraph vii also refers to the sustainability of local businesses.</p> <p>Recommendations at earlier stages: No changes to the vision are required in relation to this objective. However, job support and creation should specifically be identified in the policies.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. While support for jobs has not been specifically referenced in a policy, the policies as a whole do many things to support jobs –e.g. policies around safeguarding, landbanks and policies that protect the environment and communities which should also benefit tourism. <u>No further changes are necessary.</u></p>
<p>13. Maintain and enhance the viability and vitality of local communities</p>	<p>+</p>	<p>Paragraph vii refers to protecting the sustainability of local businesses and the amenity of local communities which will have a positive contribution towards protecting the viability and vitality of local communities (e.g. could boost tourism). Paragraph viii states that ‘a</p>

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		<p><i>high standard of reclamation and after use.....will be being delivered, providing a range of benefits for local communities....</i>' Paragraph vii also refers to liaison with local communities and businesses.</p> <p>Recommendations at earlier stages: No changes to the vision are required in relation to this objective. However, supporting communities and local businesses should specifically be identified in the policies.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However other policies in the plan indirectly benefit communities and local businesses (e.g. DO2 Local Amenity and Cumulative Impacts, DO3 Transport of Minerals and Waste and Associated Traffic Impacts etc.). <u>No further changes are necessary.</u></p>
14. Provide opportunities to enable recreation, leisure and learning	+	<p>Whilst protection is afforded to some of the key recreation assets in the Plan area (notably the National Park and also the AONBs) the vision does not specifically contain reference to protecting opportunities for recreation, leisure and learning. Protection of local amenity in paragraph vii may however also indirectly help to protect recreation and leisure assets, particularly through liaison with local communities. Similarly, paragraph viii's reference to a high standard of reclamation and after-use providing benefits for local communities and the environment including enhancing biodiversity is likely to have indirect benefits on recreation. The vision will therefore have indirect positive impacts on this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are required in relation to this objective. However, protection and enhancement / creation of opportunities for recreation, leisure and learning should be identified in the policies.</p> <p>Has the recommendation been incorporated? / Any further recommendations: No changes were necessary. However, other policies such as D10 Reclamation and Afteruse and DO2 Local Amenity and Cumulative Impacts do provide benefits. <u>No further changes are necessary.</u></p>
15. Protect and improve wellbeing, health and safety of local communities	++	<p>Paragraph vii refers to new development '<i>having the highest practicable standards of design, operation and mitigation throughout the life of the development in order to ensure that the amenity and health of local communities...are given robust protection</i>'. The vision will therefore have a strong positive impact on this objective.</p> <p>While health and amenity are protected by the vision, there is also reference to "<i>a high standard of reclamation and afteruse of minerals and waste sites</i></p>

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		<p><i>will be being delivered, providing a range of benefits for local communities.” This is considered to allow an opportunity for new areas to be made available to the community which could benefit local wellbeing and health in particular.</i></p> <p>Recommendations at earlier stages: At Preferred Options it was noted that a more specific reference to the achievement of health, safety and wellbeing would have been possible. Further whilst the vision performed positively against this objective, it was considered that protection should be given specifically to the health, safety and wellbeing of local communities through detailed policies covering amenity.</p> <p>Has the recommendation been incorporated? / Any further recommendations: Yes in part. Policy D02 Local Amenity and Cumulative Impacts has been included. This specifically guards against unacceptable impacts to a range of specific impacts that may affect local amenity. Health has also been referred to directly in paragraph vii of the vision, <u>No further changes are necessary.</u></p>
16. Minimise flood risk and reduce the impact of flooding	++	<p>Paragraph viii refers to addressing the effects from climate change, and specifically refers to addressing effects on and from flooding. The vision will therefore have a strong, direct positive impact on this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective.</p> <p>Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary at Issues and Options / Preferred Options and that is still the case.</u></p>
17. Address the needs of a changing population in a sustainable and inclusive manner	++	<p>The vision refers to providing an adequate and steady supply of minerals as well as protecting the area’s important assets. The vision also refers to liaison with local communities in delivering the Plan. The vision will therefore have a strong, direct positive impact on this objective.</p> <p>Recommendations at earlier stages: No changes to the vision are recommended in relation to this objective.</p> <p>Has the recommendation been incorporated? / Any further recommendations: <u>No changes were necessary at Issues and Options / Preferred Options and that is still the case.</u></p>

To summarise, the vision has been assessed as contributing to beneficial impacts on the environment, economy and communities in the Plan area. Potential positive impacts have been identified in relation to the natural and historic environment objectives, landscape, climate change, the economy and protecting communities. In addition, potentially strong positive impacts are identified in relation to health and wellbeing, minimising the use of

resources, transport, soils and land, biodiversity and geo-diversity, managing waste more sustainably, mitigating and adapting to climate change and enabling the supply of minerals to support the needs of the population. No negative impacts have been identified, primarily due to the vision being an overarching set of aspirations for the Plan.

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