

Minerals and Waste Joint Plan



Sustainability Appraisal Appendix 3 Part 1 (a-f) Assessment of Sites October 2016

Appendix 3a: Assessment of Sites in Craven District

Joint Minerals and Waste Plan

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ALLOCATED SITES			
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Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

WJP13 – Halton East, Near Skipton

Site Name	WJP13 Halton East Waste Transfer Station, Halton East Works, Low Lane, Halton East, Craven, BD23 6AD (XY: 403069 453772)
Current Use	Waste transfer station
Nature of Planning Proposal	Retention of waste transfer station for household and some commercial waste with higher vehicle numbers and hours of operation
Size	0.85ha
Proposed life of site	20 years plus – existing planning permission is for a permanent site
Notes	Existing waste transfer station in former quarry. Planning permission C5/34/2013/14104 currently limits vehicle numbers and hours of operation until February 2019 after which it would default back to the terms of Planning Permission C5/34/2011/12077. Proposed restoration: none proposed as existing permission is for a permanent site

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000 sites: North Pennine Moors Special Area of Conservation (SAC)/Special Protection Areas (SPA) – 1.3km north, South Pennine Moors SPA/SAC - 7km south-east, Craven Limestone Complex SAC - 12km north-west, North Pennine Dales Meadows SAC – 10km north; SSSI: West Nidderdale, Barden and Blubberhouses Moors 1.29km north. Holywell Bridge 495m south-east. Hambleton Quarry Site of Special Scientific Interest (SSSI) 2.5km east. Strid Wood SSSI 4.3km north-east.</p> <p>Site of Importance for Nature Conservation (SINC): SE05-09 Draughton Railway Line (Ratified SINC) is 1.5km south-east, Hambleton Beck Ratified SINC (SE05-03) is 1.8km south-east, Haw Park Ratified SINC (SE5-08) is 2km west, Banks Gill pre-existing SINC (SE05-04) is 1.6km south-east, Potters Gill (Potential SINC does not qualify) (SE05-10) is 1.9km SE; No functional connectivity noted; Ecological</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>networks: none noted; Green Infrastructure (GI): Site is in the Wharfe GI Corridor.</p> <p>Priority Habitat: None within 200m; Ancient woodland: None onsite or adjacent within 200m; Site visit observations: Tree belt on part of south-east side of site entrance.</p> <p>Local effects Due to the nature of the proposal to continue the existing operation it is unlikely that there would be any significant effect on Natura 2000 sites, SSSI sites or SINC. Similarly, due to the nature of existing operations and the lack of habitats on site protected species or habitats are unlikely to be unaffected, with the exception of nesting birds in boundary hedges. There are limited opportunities to improve ecological connectivity through this site.</p> <p>Plan level / regional / wider effects No effects are identified to wider biodiversity interests.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Nitrate Vulnerable Zone (NVZ): Site not within an NVZ; Source Protection Zone (SPZ): Site not within an SPZ; River Basin Management Plan (RBMP): 175m north is Hambleton Beck / Ings Beck Catchment (tributary of Wharfe); Current ecological quality is moderate potential / current chemical quality does not require assessment / at risk; Overall potential: moderate; Objective: good by 2027. Site does not appear to be connected to any RBMP lakes. Groundwater: Wharfe and Lower Ouse Millstone Grit and Carboniferous limestone; Current quantitative quality – good / current chemical quality - poor / probably at risk; Status objective: good chemical and ecological status by 2015. Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 70% of the time.</p> <p>This site already holds an Environmental Permit for those activities at this site which are subject to Environment Agency regulation under the Environmental Permitting Regulations (2010) as amended.</p> <p>Local effects As this proposed allocation is purely for the retention of an existing site no impact on water quality over and above the existing site is predicted.</p> <p>Plan level / regional / wider effects See local effects.</p>					0	0	0
3. To reduce transport miles	<p>Proximity of transport receptors The A1 lies around 7.2km east of the site and access to market, particularly York, Leeds and Harrogate is good.</p>		✓	✓		0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Access: Existing entrance at the Four Lane Ends junction of Low Lane (C399 road from Embsay) with the U2313 (unclassified road to Halton East village) then via Low Lane south to the A59; HGV Vehicles: 36 two way daily movements (application details NY/2013/0230/73A); Light Vehicles: 4 two way daily movements (application details NY/2013/0230/73A). Net change in daily two-way trip generations: light vehicles: 0; HGVs: 0.</p> <p>Traffic Assessment Rating²: Yellow – ‘There would thus be no additional traffic impact associated with maintaining the existing trip generations although it is recommended that HGV routing restrictions are maintained for the site’.</p> <p>Public Rights of Way (PRoW): None on site, though National Route number 696 (Sustrans walking and cycling route known as 'the Airedale Greenway') is 10m south.</p> <p>Rail: Nearest Rail station 510m south; Strategic Road: Nearest major road is 175m to south of site (A59). A59 is also an agreed timber route; Canal / Freight waterway: Leeds and Liverpool Canal 4km; Railhead / wharf: none nearby.</p> <p>Local effects The site is accessible onto the A59 county road, but minor works may be required to extend existing footway / street lighting to serve the site. This site is not likely to generate significant passenger travel demand. A transport assessment and travel plan would however be required.</p> <p>Low numbers of vehicles would route on to the A59, which is likely to have insignificant impacts on traffic into the medium / long term. There would be no net change in vehicle movements and therefore the proposed allocation is considered to have a neutral effect on the SA objective.</p> <p>The traffic assessment has recommended that the restriction on HGV's turning right into the site should</p>							

² The traffic assessment has informed this assessment in part, but the SA assessment of transport is broader in its scope and considers continuation effects where sites with finite lifespans would, without the plan, have been predicted to cease operation. This inevitably results in some divergence in scoring between the two assessments.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>be maintained as part of any future Section 106 agreements³.</p> <p>Plan level / regional / wider effects The proposal is not expected to have wider effects on the SA objective.</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors No Air Quality Management Areas (AQMAs) or Hazardous Substances Consent Sites within 2km. This site already holds an Environmental Permit for those activities at this site which are subject to North Yorkshire County Council regulation under the Environmental Permitting Regulations (2010) as amended.</p> <p>Local effects As this proposed allocation is purely for the retention of an existing site: no impact on air quality over and above the existing site is predicted. If traffic increases at this site there may be some air quality issues, but there is no suggestion that this is the case, and there are limited recognised receptors.</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area.</p>					0	0	0
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC) Grade 4 (Poor quality); Contaminated land: N/A for retention of site.</p> <p>Local effects A minor positive long term effect is noted as retaining this site will help avoid the need for a future replacement site which could consume an area of land resource.</p> <p>Plan level / regional / wider effects As noted in local effects, retention of this site may help to avoid the need for a replacement site within the Joint Plan Area. Potentially, reducing any land-take and associated loss of soils and undeveloped land that may be required to develop/ expand a new or existing site.</p>	✓			✓	0	+	+
6. Reduce the	<p>Proximity of factors relevant to exacerbating climate change Habitats: Tree belt on part of south-</p>	✓		✓		0	+	+

³ Jacobs, 2015. Minerals and Waste Joint Plan Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
causes of climate change	<p>east side of site entrance.</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects A minor positive long term effect is noted as retaining this site will help enable future transfer of waste, which in effect bulks waste for more efficient transport in larger vehicles, reducing carbon emissions, a key cause of climate change.</p> <p>The timescale for this facility is not known, so there is some uncertainty in the long term.</p>							
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity⁴ of a site Flooding: Site is in Flood Zone 1; Surface water flooding: <5% of the site is at low risk (1:1000 (0.1%)); Catchment Flooding Management Plan (CFMP): Wharfe Headwaters Policy Unit, policy 6; Ecological networks: none noted.</p> <p>Local effects As this proposed allocation is purely for the retention of an existing site no impact on climate adaptation over and above the existing site is predicted. Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively, and therefore uncertainty is attached to the proposed allocations ability to respond and adapt to climate change in the long term.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
8. To minimise the use of resources and encourage their re-use and	<p>Proximity of factors relevant to the resource usage of a site No spatial factors noted.</p> <p>Local effects Retaining a site is less resource intensive than having to build a new one. Minor positive effect.</p> <p>The timescale for this facility is not known, so there is some uncertainty in the long term.</p>	✓		✓		0	+	+

⁴ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

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		P	T	D	I	S	M	L
safeguarding	Plan level / regional / wider effects Not applicable to this site.							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors noted.	✓			✓	+	+	+
	Local effects Retaining a waste transfer site will allow waste to be efficiently filtered and improve the ability to move waste up the waste hierarchy by ensuring waste goes to the correct place e.g. diverting recyclable glass from landfill. Plan level / regional / wider effects None noted.							?
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	Proximity of historic environment receptors Conservation Areas: 2 within 1km - Halton East 0.67km east, Eastby 0.9km north-west; Registered Parks and Gardens: None within 5km. Registered Battlefields: None within 5km; World Heritage Sites: None within 5km; Scheduled Monuments: None within 2km; Listed buildings: 1 within 1km (Halton Hall (Grade II) 950m east); Named designed landscapes (from pre validated dataset derived from HLC): none within 2km. Historic Landscape Classification (HLC) broad type: Extractive; HLC type: Quarry limestone. Undesignated archaeology in this area includes the remains of former medieval field systems. There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the area, although current archaeological evidence for this is limited. Local effects Historic England notes heritage assets could be affected by the intensification of use of this site, as the site is close to Halton East, Draughton and Eastby Conservation Area. It is anticipated that there will be no impact upon the archaeological resource as the proposed development is for the use of a former quarry, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed. The HLC type of this area is quarry limestone. The allocation site is a smaller part of a larger area of					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
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	<p>similar character type, of which the legibility is complete. Within the allocation site the previous HLC will have already become invisible as the extractive development has replaced an earlier field system. Accordingly, the continued use of the site for waste transfer purposes is assumed to have no overall impact.</p> <p>Plan level / regional / wider effects No impacts noted to the wider historic environment.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Park: Yorkshire Dales is 1.15km north; Areas of Outstanding Natural Beauty (AONB): Nidderdale 5.9km east; Heritage Coast: Not within 10km; Inheritance Tax Exempt Land (ITE): Bolton Abbey Estate ITE land is 270m north. District level landscape designations: Site is not located with a district landscape designation but it is sited within a former Special Landscape Area. The area forms the setting to the National Park. National Character Area (NCA): Yorkshire Dales; Green Belt: No.</p> <p>North Yorkshire Local Character Area (LCA): Settled industrial valleys: high visual sensitivity as a result of strong inter-visibility with adjacent higher landscape character types; low ecological sensitivity overall, resulting from the predominance of improved agricultural fields and extraction sites; moderate landscape and cultural sensitivity due to strong historic integrity with numerous heritage features. District LCA: In Craven LCA as Open Upland Pasture.</p> <p>Intrusion: Disturbed, but it is very close to tranquil areas; Urban intrusion: Disturbed due to the presence of the existing waste transfer facility and quarry, the A59 and A65 corridors, and scattered villages. However the site is close to extensive undisturbed areas. Light pollution: Relatively low – 88 on a scale of 1-255, with 1 representing maximum darkness (CPRE, 2000)</p> <p>In this open landscape surrounded by upland areas it is far from an ideal site. The existing coating plant and this site are visible from the edge of the National Park, the Eastby Conservation Area, and from the edge of the Halton East Conservation Area. However, the development is partly accommodated at present, due to the variations in landform which break up views, the recessive colour used for the buildings, and the maturity of the screen tree planting in the vicinity of the site (the site is not easily seen from local roads closer to the site due to screening by trees). However, aerial photographs show how</p>	✓		✓	✓	0	0	?

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	<p>alien the existing development is within the surrounding landscape.</p> <p>Local effects The site is unlikely to affect views from visual receptors as the site is within an existing facility, itself situated within the former Halton East Quarry. However the existing facility is potentially visible from the Yorkshire Dales National Park as it can be glimpsed from the edge of Eastby which is located partly within the Park.</p> <p>Increased traffic from the site could affect rural character, although the traffic assessment has indicated there would be no net change in traffic due to the site allocation.</p> <p>Overall, as this is an existing developed site impacts to the SA objective are expected to be neutral in the short and medium term, and uncertain in the long term, depending on restoration proposals.</p> <p>Plan level / regional / wider effects Buildings and bunds are likely to be visible from some areas of the National Park, which is a nationally significant designation.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Site is close to the A59 giving it access to other waste facilities further afield.</p> <p>Local effects The retention of the site would safeguard the existing jobs at the site. It is also considered that the site would enable value to be added to waste (through re-use/recycling) and may divert some waste from landfill avoiding associated charges. The costs of waste management may be reduced by retaining this site as opposed to developing a new site as all the required infrastructure is already in place. Impacts are considered to be minor positive.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>	✓		✓		+	+	+
13. Maintain and enhance the viability and	<p>Proximity of factors relevant to community vitality / viability Index Multiple Deprivation (IMD): Barden Fell Ward; IMD rank 20,565; Not in most deprived 20%. Nearest Village: Halton East</p>	✓		✓		+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
vitality of local communities	<p>approximately 1km east. Embsay is 1.63km west. Skipton is 3.33km south-west.</p> <p>Local effects Retaining this site may support a few jobs for longer.</p> <p>Plan level / regional / wider effects Considered at a local scale.</p>							?
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Public rights of way (PRoW): National Route number 696 (Sustrans walking and cycling route known as 'the Airedale Greenway') is 10m south. No common land or village greens within 500m.</p> <p>Local effects As this proposed allocation is purely for the retention of an existing site, no significant impact on recreation over and above the existing site is predicted.</p> <p>Plan level / regional / wider effects Same as local effects.</p>					0	0	0
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Nearest Village: Halton East approximately 1km east; closest property that appears to be residential is Crag House Farm approx. 700m north-east.</p> <p>Local effects Due to the distance of receptors no significant impacts on health and wellbeing are predicted.</p> <p>Plan level / regional / wider effects Considered at a local scale.</p>					0	0	0
16. To minimise flood risk and reduce the impact of	<p>Proximity to flood zones Flooding: Site is in Flood Zone 1; Surface water flooding: <5% of the site is at low risk (1:1000 (0.1%)). Site is in a 1km square identified as susceptible to Clearwater and superficial deposit flooding across <25% of the 1km square. However, no additional risk factors are noted and this development is above ground so is likely to be at a lower risk. This site is not at risk from the 1:20 (5%)</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
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flooding	<p>flood event. Catchment Flood Management Plan: Wharfe Headwaters Policy Unit, Policy 6.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test⁵ undertaken for the site concluded that this site would 'Pass'⁶. As this proposed allocation is purely for the retention of an existing site no significant impact on flooding over and above the existing site is predicted. A site specific flood risk assessment is not required as this site is in Flood Zone 1 and is less than 1ha.</p> <p>Plan level / regional / wider effects None noted.</p>							
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population Site does not conflict with other allocations.</p> <p>Local effects Efficient waste transfer is beneficial to a sustainable population. Minor positive effect.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		+	+	+
Cumulative / Synergistic effects⁷								
Planning context	<p>Site is midway between Halton East and Embsay and 4.5km west lies Skipton. Draughton lies to the south. According to the Craven Local Plan (Draft, 2014), Skipton is the main focus of development in the South sub-area. Despite this, housing growth is low in this area, with 16 dwellings per annum planned for Skipton and 3 per year for Embsay. About 17 hectares of additional land for employment will be planned for the South sub-area. Generally the small area of this site plus the expected development is not predicted to lead to significant cumulative effects.</p>							

⁵ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

⁶ The Sequential Test noted that sites WJP01 is at slightly lower risk from surface water flooding with WJP25 being at a similar level of risk. WJP03 is at a slightly higher level of risk from surface water flooding and is also within Flood Zone 2 to a minor extent. WJP02 is within Flood Zones 2 and 3. Therefore this site should be considered alongside WJP25 but after WJP01 and before WJP03 and WJP02.

⁷ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Other Minerals and Waste Joint Plan Sites	Other Minerals and Waste Plan Sites: WJP17 (Skibeden Landfill and Household Waste Recycling Centre (HWRC)) lies 1.3km west.
Historic minerals and waste sites	<p>Historic minerals and waste sites: Several extraction applications between 800m and 3.2km to south-west of site (to south of Embsay) associated with Skibeden and Skipton Rock.</p> <p>Other active / dormant sites: Active carboniferous limestone site (Skipton Rock) is 670m west. A dormant carboniferous limestone site lies 1.4km south-east, while Skibeden HWRC lies 1.43km south-west. A material recycling facility at Skipton Rock Quarry lies 1.46km SE.</p> <p>Site lies within historic landfill site. Wheelam Rocks Historic Landfill site is 1.4km south. Skibeden Quarry historic landfill site 1.1km south-west. Tannery Dam Historic Landfill site 2.1km west. Scattered sites further west at around 5km distant.</p> <p>This site may have a cumulative positive effect with other nearby recycling facilities as it could help to transfer waste between them.</p>
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Landscaping of the site would mitigate potential impacts to the setting of: Halton East, Draughton and Eastby Conservation Areas and Yorkshire Dales National Park and local landscape features. • Design to include suitable arrangements for access and local roads, including an appropriate a traffic management plan regarding access to and from the A59. • Appropriate arrangements for the assessment, control of and mitigating the effects of noise and dust, etc. 	

WJP17- Skibeden, near Skipton

Site Name	Site WJP17 Skibeden Landfill and HWRC, Harrogate Road, Skipton, Craven
Current Use	Household Waste Recycling Centre for waste transfer of household and some commercial waste.
Nature of Planning Proposal	Retention of Household Waste Recycling Centre for waste transfer of household and some commercial waste
Size	0.39ha
Proposed life of site	Unknown at present
Notes	Restoration unknown at present. An existing landfill gas plant and leachate treatment facility to remain on site until no longer required for their respective functions in connection with emissions from a former landfill site.

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Assumptions – this site is currently operational however planning permission was related to the landfill site which is now being restored. The baseline conditions for the site are therefore considered the existing operational HWRC and the restored landfill site (however it is unknown what the restored land use of the site would be). The site is assumed to operate throughout the Plan period for the purposes of assessment with some level of restoration during this period in the long term.

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1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000 sites: North Pennine Moors SPA/SAC 2.2km north, South Pennine Moors SAC/SPA is 7km south; Craven Limestone Complex SAC is 12km north-west; North Dales Pennine Meadows is 10km north. SSSI: 3 SSSIs within 5km: Holywell Bridge 700m north-east, West Nidderdale, Barden and Blubberhouses Moors 2.1km north, and Hambleton Quarry 3.4km east; SINCS - 2 SINCS within 2km: Haw Park (ratified SINC, SE05-08) 350m west and Potters Gill (potential SINC, SE05-10) 1.16km south.</p> <p>Priority Habitat: none within 200m of the site.</p> <p>GI: Site entirely within Wharfe regional GI corridor.</p>	✓		✓		0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects There are no likely significant effects on Natura 2000 sites as the distance and type of development make it unlikely that there will be any significant effect. Similarly, the proposal is for the retention of an existing Household Waste Recycling Centre (HWRC), therefore it is considered unlikely that there would be any new impacts to SSSIs or SINCs.</p> <p>In terms of impacts on priority habitats or species, the HWRC is already present. The landfill is now closed and undergoing restoration. Therefore unless the site was to lie inactive for a period of time it is unlikely there would be any impact on priority habitats or protected species as a result of the proposals.</p> <p>There are no known invasive species problem on site that could be spread but importation of household and commercial waste may include invasive species e.g. plant material.</p> <p>If site restoration were to integrate biodiversity enhancement there would be minor positive effects.</p> <p>Plan level / regional / wider effects No effects are identified to wider biodiversity interests.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site does not lie within a NVZ or Groundwater SPZ. CAMS: surface water resources available at least 50% of the time, though at low flows new licenses may be more restricted. Water extraction is not likely to be a significant issue for this site however.</p> <p>The site is in the Humber RBMP. The nearest RBMP watercourse is 'Eller Beck from Haw Beck to River Aire' (current ecological quality: moderate potential; current chemical quality: does not require assessment). No RBMP lakes. In terms of groundwater the RBMP identifies the site as being in the 'Aire and Calder Carboniferous Limestone / Millstone Grit / Coal Measures' which has good quantitative quality / poor chemical quality.</p> <p>This site already holds an Environmental Permit for those activities at this site which are subject to Environment Agency regulation under the Environmental Permitting Regulations (2010) as amended.</p> <p>Local effects The retention (and thus extended operation) of this site is considered unlikely to have</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>significant impacts in relation to water quality and quantity assuming that good site practice is followed and the relevant environmental permits and regulations are complied with.</p> <p>Plan level / regional / wider effects See local effects.</p>							
3. To reduce transport miles and associated emissions from transport and encourage the use	<p>Proximity of transport receptors Site is close to Skipton with good access to the A59. Access: Existing access at Skibeden HWRC onto A59 (approximately 330m east of junction between A59 and A65); Light Vehicles: No change from present 209 two way movements; HGV: 1 to 2 two way movements; PRoW: None on-site.</p> <p>Net change in Daily Two-Way Trip Generations: light vehicles: 0; HGVs: 0.</p>		✓		✓	0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
of sustainable modes of transportation	<p>Traffic Assessment Rating⁸: 'Green' – 'Operation continuing as at present, no significant impacts likely'.</p> <p>Rail: 3.5km west; Strategic Road: A59 adjacent; Canal / Freight waterway: 2.6km west; Railhead / wharf: none within 20km.</p> <p>Local effects As a retained site, vehicle numbers are expected to stay the same, though they may continue longer into the future (at a time when they may, without this allocation, have been expected to cease from this site⁹). Given that the need for waste collection would be unlikely to significantly fall (on current trends) the vehicles arriving at this plant would simply go somewhere else if this site closed (possibly somewhere less sustainable). There is, therefore, no net impact from traffic levels; however minor works may be required to extend existing footway / street lighting to serve the site and its local transport effects. A travel assessment will be required.</p> <p>Plan level / regional / wider effects The proposal is not expected to have wider effects on the SA objective.</p>						?	?
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a hazardous substances consent consultation zone. No AQMAs have been identified within 15km. The site is around 950m from the nearest settlement, Embsay, although a number of isolated properties lie in closer proximity (nearest property 230m south-east and there are a number of other scattered properties at c. 300m distance).</p>					0	0	0

⁸ The traffic assessment has informed this assessment in part, but the SA assessment of transport is broader in its scope and considers continuation effects where sites with finite lifespans would, without the plan, have been predicted to cease operation. This inevitably results in some divergence in scoring between the two assessments.

⁹ The assessment has assumed that the site would continue to operate without a new planning permission until the medium term.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>This site already holds an Environmental Permit for those activities at this site which are subject to Craven District Council regulation under the Environmental Permitting Regulations (2010) as amended.</p> <p>Local effects Given that the site is existing (therefore construction would not be required), is some distance from the nearest settlement and individual properties are generally well screened by intervening trees / woodland, air quality impacts to residential receptors are predicted to be negligible. There is however the potential for odour impacts due to the nature of the site and this should be considered further. Impacts are considered to be negligible with some uncertainty.</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area.</p>					?	?	?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Site is located on ALC Grade 4 (poor quality) land which is currently being used as a HWRC and therefore consists entirely of hard standing.</p> <p>Local effects A minor positive long term effect is noted as retaining this site will help avoid the need for a future replacement site which could consume an area of land resource.</p> <p>Plan level / regional / wider effects As noted in local effects, retention of this site may help to avoid the need for a replacement site within the Joint Plan Area. Potentially, reducing any land-take and associated loss of soils and undeveloped land that may be required to develop/ expand a new or existing site.</p>					0	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Areas of trees / woodland lie adjacent to the site. No other HWRCs in close proximity to the site (nearest sites identified are Ilkley (c. 11km south-east) and Barnoldswick (c. 15km south-west).</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects It is considered that the retention of the site would be beneficial in terms of reducing emissions as the closest HWRC is over 10km from WJP17 and therefore current users of the site would have to travel significantly further in order to access HWRC facilities should the allocation site not be retained. Overall impacts are considered to be minor positive in relation to this objective.</p>	✓			✓	+	+	+
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity¹⁰ of a site Site is located in Flood Zone 1. About 5% of the site is subject to medium risk (1:100 (1%)) surface water flooding. Low risk (1:1000 (0.1%)) affects a further 10% of the site.</p> <p>Local effects The site is not particularly prone to flooding and it is not considered that the retention of the site would block the ability of neighbouring land uses to adapt to climate change¹¹. Impacts are considered to be neutral.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>					0	0	0
8. To minimise the use of resources and encourage their re-use and	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects The retention of the site would facilitate the recycling and re-use of waste and would facilitate the movement of waste up the waste hierarchy (thereby reducing demand for future virgin</p>	✓			✓	++	++	++

¹⁰ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

¹¹ Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
safeguarding	materials). Impacts are therefore considered to be major positive in relation to this objective. <u>Plan level / regional / wider effects</u> The site is likely to serve the community and therefore effects are considered there.							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified. <u>Local effects</u> The site would facilitate recycling and reuse of household waste and therefore would be allocated for a purpose that moves waste management up the waste hierarchy. The site would also increase the opportunities for local people to access waste management infrastructure (as the nearest HWRC to WJP17 are in excess of 10km). Impacts are therefore considered to be major positive in relation to this objective. <u>Plan level / regional / wider effects</u> The retention of this site will help to reduce waste sent to landfill in the wider Joint Plan Area as waste is recycled and reused.	✓		✓		++	++	++
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<u>Proximity of historic environment receptors</u> Conservation Areas: Embsay Conservation Area 1km north-west; Registered Parks and Gardens: none within 5km; Registered Battlefields: none within 5km; World Heritage Sites: none within 5km; Scheduled Monuments: none within 2km; Listed Buildings: 5 within 1km - nearest is milestone (Grade II) adjacent to site to south, High Skibeden farmhouse (Grade II) is 225m south. Named Designed Landscapes: none within 2km. HLC Broad type: Extractive; HLC Type: Quarry limestone. Undesignated archaeology in this area includes the remains of former medieval field systems. There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the area, although current archaeological evidence for this is limited. <u>Local effects</u> The allocation site is a smaller part of a larger area of similar character type, of which					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>the legibility is complete. Within the allocation site the previous HLC will have already become invisible as the extractive development has replaced an earlier field system. Accordingly, the continued use of the site for recycling purposes is assumed to have no overall impact. The site is screened from most listed buildings.</p> <p>It is anticipated that there will be no impact upon the archaeological resource as the proposed development is for the use of a former quarry, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed.</p> <p>Plan level / regional / wider effects No impacts noted to the wider historic environment.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: Yorkshire Dales 1.15km north; AONBs: Nidderdale 6.4km east; Heritage Coast: None within 10km; Inheritance Tax Exemption Land: Bolton Abbey Estate 1.36km north; Local Landscape Designations: none within 5km.</p> <p>NCA: Yorkshire Dales; NY&Y LCA: Area 31 'Settled Industrial Valleys'; District LCA: Craven LCA: Area 22, Disturbed Landscapes.</p> <p>Tranquillity: Disturbed; Urban intrusion: disturbed by proximity to Skipton, quarrying, roads and road junction. Light pollution: Relatively low – 88 on scale of 1-255, with 1 representing maximum darkness (CPRE, 2000).</p> <p>Local effects The site is not in a currently designated landscape. However, it is sited within a former Craven Special Landscape Area. The area forms the setting for the National Park. It could potentially be visible to visitors to the National Park who use the A59 and A65 to access it. However it is a small area within a much larger area of disturbance.</p> <p>The site is a small part of a very large area that has formerly been quarried (Skipton Rock Quarry). It would not impinge on the wider landscape. However, it is potentially visible from the A59 and A65.</p>					0	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The site is partly screened by woodland, and by topography. There is uncertainty over the effects of this site on the current landfill restoration.</p> <p>Landscape impact is limited due to location. This site has less of a landscape character impact overall, as it is closer to the road (which means the character is more disturbed), but due to its location (with hill to north) there is no impact on the National Park. However, there is a need to maintain the mitigation derived from the existing planting.</p> <p>Plan level / regional / wider effects Potentially visible to visitors to the National Park, which is a nationally significant designation.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Site is close to Skipton with good access to the A59.</p> <p>Local effects The retention of the site would safeguard the existing jobs at the site. It is also considered that the site would enable value to be added to waste (through re-use/recycling) and may divert some waste from landfill avoiding associated charges. The costs of waste management may be reduced by retaining this site as opposed to developing a new site as all the required infrastructure is already in place. Impacts are considered to be minor positive.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>		✓	✓		+	+	+
13. Maintain and enhance the viability and vitality of local	<p>Proximity of factors relevant to community vitality / viability IMD: Skipton North Ward: IMD Rank 31,645 - Not in most deprived 20%. Nearest significant communities: Embsay 950m north-west, Skipton 1.7km west.</p> <p>Local effects The retention of the site would safeguard a limited number of local jobs at the site and</p>		✓	✓		+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>would retain local infrastructure for the management of waste further up the waste hierarchy. The site is small and relatively well screened and it is not considered that it would impact upon tourism in the nearby Yorkshire Dales National Park. Impacts are considered to be minor positive.</p> <p><u>Plan level / regional / wider effects</u> Not applicable to this site.</p>							?
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> No local routes within 250m or national routes within 500m. No common land or registered village greens within 500m.</p> <p><u>Local effects</u> The site lies 1.15km from Yorkshire Dales National Park; however it would not be visible from this designated landscape due to intervening topography. It is not considered that the retention of the site would impact upon the enjoyment of the nearby National Park or other recreational and leisure facilities in the area. Impacts are therefore considered to be neutral in relation to this objective.</p> <p><u>Plan level / regional / wider effects</u> Not applicable to this site.</p>					0	0	0
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> No Hospitals, clinics or health centres within 1km. The village of Embsay lies 950m north-west. Individual properties lie 230m south-east and a number of other scattered properties at c. 300m distance.</p> <p><u>Local effects</u> Although the site is relatively distant from settlements, a number of isolated residential receptors lie in relatively close proximity. It is considered that the retention of the site may prolong any amenity impacts related to the operation of the site including odour, noise, litter and increased traffic in the area. A minor negative impact is therefore predicted in relation to this objective.</p> <p><u>Plan level / regional / wider effects</u> Not applicable to this site.</p>		✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is located in Flood Zone 1. About 5% of the site is subject to medium risk (1:100 (1%)) surface water flooding. Low risk (1:1000 (0.1%)) affects a further 10% of the site. Site is in a 1km square identified as susceptible to Clearwater and superficial deposit flooding across >25% to <50% of the km square. No additional risk factors are noted. Proposals are above ground so risk is likely to be lower. This site is not at risk from the 1:20 (5%) flood event.</p> <p>Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test¹² undertaken for the site concluded that this site would 'Pass'¹³. The site is not particularly prone to flooding and it is considered that the retention of the existing HWRC would have negligible impacts in relation to this objective. A site specific flood risk assessment is not required as this site is in Flood Zone 1 and is less than 1ha. Surface water runoff from this site should be managed using SuDS where appropriate.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The retention of the site would increase public access to waste management facilities and would make a contribution to self-sufficiency in waste management.</p>		✓	✓		+	+	+

¹² The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

¹³ The Sequential Test noted that sites WJP01 is at slightly lower risk from surface water flooding with WJP25 being at a similar level of risk. WJP03 is at a slightly higher level of risk from surface water flooding and is also within Flood Zone 2 to a minor extent. WJP02 is within Flood Zones 2 and 3. Therefore this site should be considered alongside WJP25 but after WJP01 and before WJP03 and WJP02.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects The retention of the site would help to reduce the requirement for additional waste management facilities in the wider Plan area.							
Cumulative / Synergistic effects¹⁴								
Planning context	Site is midway between Skipton (2.2km south-west) and Embsay (1.2km north-west). According to the Craven Local Plan (Draft, 2014). Skipton is the main focus of development in the South sub-area. Despite this, housing growth is low in this area, with 16 dwellings per annum planned for Skipton and 3 per year for Embsay. About 17 hectares of additional land for employment will be planned for the South sub-area. Generally the small area of this site plus the expected development is not predicted to lead to significant cumulative effects. Allocations are not yet finalised but draft consultation list reveals site is not within 200m of any proposed allocations.							
Other Minerals and Waste Joint Plan Sites	Halton East Waste Transfer Station lies 1.3km east.							
Historic minerals and waste sites	<p>Site lies 720m east of a cluster of historic applications (1950s, 60s and 70s) associated with the Skipton Rock extraction site. This is also listed as an active carboniferous limestone site. A dormant carboniferous limestone site lies 1.6km south east, while Wheelam Rocks borrow pit (granted 1990s) lies 2.5km south.</p> <p>No cumulative effects are noted. This site may have a cumulative positive effect with other nearby recycling facilities as it could help to transfer waste between them.</p>							
Limitations / data gaps								
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.								
Mitigation requirements identified through Site Assessment process								
<ul style="list-style-type: none"> • Mitigation measures to address and control invasive species. • Landscaping of site to mitigate potential impacts on setting of Yorkshire Dales National Park and local roads including through retention of existing planting. • A traffic assessment to ensure suitable arrangements for access onto and in connection with the A59. • Appropriate arrangements for the assessment, control of and mitigating the effects of noise and dust, etc. 								

¹⁴ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Appendix 3b: Assessment of Sites in Hambleton District

Joint Minerals and Waste Plan

Contents

ALLOCATED SITES			
Reference	Site Name	Type of site	Page
MJP06	Langwith Hall Farm, east of Well	Extraction of sand and gravel	4
MJP07	Oaklands, near Well	Extraction of sand and gravel	23
MJP33	Home Farm, Kirkby Fleetham	Extraction of sand and gravel	42

EXCLUDED/ DISCOUNTED SITES			
Reference	Site Name	Type of site	Page
MJP33	Home Farm, Kirkby Fleetham (excluded area)	Extraction of sand and gravel	63
MJP38	Mill Cottages, West Tanfield	Extraction of sand and gravel	83
MJP43	Land to west of Scruton	Extraction of sand and gravel	97
MJP60	Land to West of Kirkby Fleetham	Extraction of sand and gravel	114

Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

MJP06 – Langwith Hall Farm, east of Well

Site Name	MJP06 Land to south of Langwith House, Long Lane, Well, Bedale, Hambleton (XY: 428876 481246)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel
Size	43.1ha
Proposed life of site	4 to 5 years
Notes	Possible restoration to lake, nature conservation, agriculture and forestry. Proposal includes diversion of the Ings Goit stream. Planning application (NY/2011/0242/ENV) is awaiting determination for a similar, but not identical area. An application (NY/2014/0271/ENV) for the continuation of extraction from the existing site and the retention of the plant site until 31 January 2018 was granted planning permission in February 2016.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES / SITE ASSESSMENT SPREADSHEET).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and	Proximity of international / national and local designations and key features Natura 2000: 10km to the west lies the North Pennine Moors Special Protection Area / Special Area of Conservation (SPA/SAC); Sites of Special Scientific Interest (SSSI): 4km to Ripon Parks SSSI; Sites of Interest to Nature Conservation	✓	✓	✓		-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
geo-diversity and improve habitat connectivity	<p>(SINC): eastern Boundary of site immediately adjacent to very linear Moor Lane, Kirklington (SE28-10) SINC, Nosterfield Quarry North (SE28-12) 30m. House Close Wood SINC (SE28-04) also 600m; Kirklington Low and High Wood SINC is 1.2km; Low Park Wood is 1.7km and Low Park House Track (deleted SINC) 1.5km. Local Nature Reserve (LNR): Nosterfield LNR is 1.2km to south-west.</p> <p>Priority Habitat: Very small area of deciduous woodland shown on map overlapping boundary; Ecological networks: Living Landscape is circa 10% of site (southern area) in River Ure Corridor NY10; Very small area of England Habitat Network around Fox covert; Green Infrastructure (GI): Site in Bedale sub regional GI network.</p> <p>Site visit recorded hedgerows and standalone trees on site.</p> <p>There have been extensive ecological surveys undertaken as part of a current planning application (NY/2011/0242/ENV). This also includes Phase 1 habitat survey.</p> <p>Local effects Impacts upon SINC network likely to be minor and possible to mitigate e.g. using stand off from Moor Lane SINC and control measures for dust.</p> <p>Protected species that may be supported by habitats on site include kingfisher, water vole, nesting birds, foraging bats and badger. There is also the potential for the site to attract bittern in the future as it is recorded locally. There may be an impact on the aquatic ecology of Ings Goit as the site would involve the diversion of this water course into a lake (this diversion is also likely to lead to a loss of foraging habitat onsite which may affect certain species).</p> <p>A nearby previously restored minerals site has created priority habitats including reed bed and calcareous grassland. Other priority habitats surrounding the site are found in SINC's and Nosterfield LNR. There are opportunities through appropriate restoration to create priority habitats that will provide habitat connectivity and aid species movement.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Current Nosterfield Quarry site is known to have New Zealand Pigmyweed <i>Crassula helmsii</i>, an invasive species, which is notoriously difficult to eradicate. As works at the proposed site include working below the water table and there are hydrological links off site via the Ings Goit watercourse there is the potential that the invasive species could be spread.</p> <p>Cumulative impacts may result from existing quarrying at Ladybridge Farm, previous quarrying at Nosterfield Quarry and potential future quarrying. This could cause impacts upon protected species resulting from disturbance to habitats and operational impacts such as noise and dust. There is also potential for positive cumulative impacts resulting from habitat restoration schemes that collectively are creating priority habitats and therefore improving the local area in terms of habitat connectivity.</p> <p>In the short term there would be potential negative impacts upon habitats and species of conservation concern. In the medium and long term, opportunities to create priority habitats that will support species of conservation concern will come into play, provided that the restoration scheme prioritises biodiversity as a long term objective of the site including long term management (landownership will be key to successful restoration as long term management is very difficult to secure if the developer does not own or have an agreement in place on the land).</p> <p>Plan level / regional / wider effects Having regard to the source of any impacts, as well as potential pathways and receptors it is considered that there would be no significant impact on the integrity of Natura 2000 sites. It is also considered that there would be no impact upon SSSIs.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors The site is in a Nitrate Vulnerable Zone (NVZ) (groundwater); no groundwater source protection zones (SPZ); In Humber River Basin Management Plan (RBMP) site is in Swale / Ure / Nidd / Ouse (SUNO) management area. The Ings Goit watercourse cuts through the site. This has good ecological status and good overall status, with a status objective of good by 2015. No RBMP lakes. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Any site is likely to require the diversion of Ings Goit which, without mitigation could have significant effects on water body status. However, the Environmental Statement in support of the planning application found that the surface water quality in the watercourse will not be compromised during the operation of the site².</p> <p>Potential spillages could affect groundwater, particularly as it is likely that this site would involve working below the water table as in the recent application at this site, although this is reduced by Middle Permian</p>	✓	✓	✓		m -	m -	m -

² Lafarge Tarmac, 2015; Nosterfield Quarry, North Yorkshire – Langwith House Farm Extension. Volume 2 Environmental Statement Revision 2015.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Marl (MPM) (Edlington Formation), boulder clay and silts beneath the application area. The MPM crops out in a belt of low ground to the east. If this site is similar to the current planning application in the area, impacts on the principal aquifer may be lessened by the geological barriers between the site and the aquifer. Groundwater flow may also be affected, however the planning application found that the proposed development would not significantly alter the groundwater flow direction.</p> <p>The Environmental Statement also highlights the potential for increases in nitrates as a possible eutrophication risk. In terms of this assessment if it is assumed that 43.1ha would be excavated, this would be above the 25ha that would actually be worked in the current application. However, it is far from clear whether the area cited in this submission would also include other areas such as landscaping.</p> <p>Therefore significance is rated as moderate negative but with considerable uncertainty. Impacts may lessen over time as restoration restores some hydrological regimes, but it is likely that at least some hydrological features will be permanently changed. Impacts may be mitigated through sound environmental management.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site is close to the A1(M) (3.8km east) giving reasonably good access to York, Leeds and Harrogate and Teesside (though its central location does not align it with one specific market area). Access: confirmed as being use of existing Nosterfield Quarry access on to B6267 (approximately 500m east of Nosterfield village). Light vehicles: 34 two-way movements (as sourced from application details NY/2011/0242/ENV); HGV Vehicles: 200 two-way movements (as sourced from application details NY/2011/0242/ENV).</p> <p>Net change in daily two-way trips: Light vehicles 0; HGVs: 0. Traffic Assessment rating: Yellow – ‘<i>submission would maintain traffic levels at the Nosterfield Quarry site and use an established point of access. There are thus expected to be no additional traffic impacts associated with the proposal however it is recommended that similar routing restrictions to those currently in place are maintained as part of any subsequent planning</i></p>		✓	✓		-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p><i>consent.</i>³</p> <p>PRoW: None on site.</p> <p>Rail: 6.5km north (station at Bedale 6.5km north); Strategic Road: A6108 is 2.8km south; B6267 is a timber route; Canal / Freight waterway: Ripon Canal 10km south.</p> <p>Local effects Site would generate significant HGV movements (200 two-way movements per day), though the net overall impact on traffic levels is effectively the same as current levels (though effects will be extended for the duration of this extension). Although access to the A1(M) is relatively good, the site is centrally located between northern and southern markets (therefore not particularly proximal to either). HGV movement is acceptable onto B6267, however, minor works may be required to improve the existing access arrangements so a traffic assessment would be required. No sustainable transport is likely to contribute to the site.</p> <p>This is scored as a minor negative against the SA objective for the short term as this site would maintain traffic levels at the Nosterfield Quarry site and use an established point of access. The Traffic Assessment recommends that similar routing restrictions to those currently in place are maintained as part of any subsequent planning consent.</p> <p>Plan level / regional / wider effects None noted.</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors No Air Quality Management Areas (AQMAs) or Hazardous substances consultation zones nearby.</p> <p>Local effects The current planning application notes minor dust impacts on nearby SINC sites and Nosterfield Quarry LNR. Scoping of the current planning application suggested that dust and air quality</p>		✓	✓	✓	-	-	0

³ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>impacts would not be significant enough for further assessment. In particular, wet working means that dust is less likely, aside from during initial soil stripping and during restoration. The planning application ruled out impacts to Nosterfield and Thornborough on account of distance, citing only limited isolated properties as potentially exposed to levels that were significantly below a nuisance level. Nonetheless, this is a site with a slightly different boundary that may involve different configurations of working and for which mitigation is not yet considered. There are very limited numbers of isolated buildings set away from the road en-route to the A1(M). Therefore minor impacts are predicted in the short and medium term, with uncertainty noted, depending largely on haulage routes and mitigation.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): Grade 3. Land instability: not in risk area. Contaminated land: Greenfield site so contamination unlikely.</p> <p>Local effects Up to 43.1ha of possible best and most versatile agricultural land (Grade 3) land will be lost⁴. However, some of this may be restored to agriculture (subject to passing a test of viability e.g. where extraction below the water table is proposed, which can affect the economic viability and timescales of a restoration scheme).</p> <p>Plan level / regional / wider effects If best and most versatile agricultural land is lost at the site, it would</p>	✓	✓	✓		-	-	-

⁴ The best and most versatile agricultural land is ALC Grade 1 to 3a. Based on available mapping the site is located within ALC Grade 3 land, without further investigation it is not known whether it is Grade 3a or 3b. For the purposes of this SA a worst case scenario approach has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>add cumulatively to the loss of agricultural land to development land in England. However, the loss is considered to be a small in relation (0.4%) to the overall agricultural land lost in England per annum to development⁵ but could have a small scale effect on national food production capacity.</p> <p>The overall level of contribution to the objective is considered to be minor negative.</p>					?	?	?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Very small area of deciduous woodland shown on map overlapping boundary. Fox Covert woodland adjacent.</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects The site is not expected to create a net change in vehicle movements from levels that are generated by the existing site (see SA objective 3). However, it would maintain current levels of traffic to and from the site contributing to climate change through vehicle emissions. Although the site is in close proximity to the A1(M), the site is located midway between northern and southern markets. A significant amount of energy will be required for machinery to extract the minerals from the site, with associated emissions and use of natural resources. Insignificant high carbon habitats are likely to be lost.</p> <p>Overall the site would have a moderate negative effect over the short and medium, and potential minor positive effect in the long term following restoration. An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken⁶.</p>	✓			✓	m -	m -	+ ?

⁵ 43.1ha (assuming all land is BMV) annualised across the 5 year life of the site would be an annual 8.6ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. An 8.6ha loss would represent a 0.4% contribution to this category of soil loss across England for each year of the site.

⁶ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity⁷ of a site About 25% of this site is in Flood Zones 2 and 3. About 15% to 20% of the site is subject to surface water flooding, much of which is at 1:30 (3.33%) high risk of flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>Ecological networks: West of site (5% (around Fox Covert)) intersects with the England Habitat Network (EHN).</p> <p>Up to 43.1ha of possible best and most versatile land will be lost.</p> <p>Local effects Flooding is considered insignificant to minor negative as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. Climate change is likely to extend the area of flood zones, however, as extraction is only likely to be for 4 to 5 years from 2016, this is not thought to be a significant issue for this site. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively. Fox Covert is already isolated from the surrounding landscape so effects are considered neutral. In the medium and longer term restoration to nature conservation would increase the adaptive capacity of the habitats. In the longer term, restoration to water in the floodplain may be beneficial in terms of reducing risk elsewhere in the catchment.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative.</p>	✓			✓	m -	m -	- ?
8. To minimise the use of resources and	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless</p>	✓		✓		--	--	--

⁷ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
encourage their re-use and safeguarding	recycled). This is considered to have a high negative effect on the SA objective. Plan level / regional / wider effects Not applicable to this site.							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified. Local effects None noted. Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.		✓		✓	-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	Proximity of historic environment receptors There are no conservation areas within 1km; Registered Parks and Gardens: Thorp Perrow (Grade II) is 3.5km north-west (1001075), Norton Conyers (Grade II) is 4.6km south-east (1001068); Registered battlefields: None within 5km; World Heritage sites: None within 5km; Listed buildings: None within 1km but 5 in Nosterfield just over 1km from site (Grade II Listed Buildings in Nosterfield Village between 680m and 880m south. "The Freemasons Arms, Chapel Row X 2, Village Farmhouse and Kiln Farmhouse" (1150778, 1315194, 1190346, 1150783, 1190384); "At Risk" Scheduled Monument: "Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow" (1004912) 750m south, Scheduled Monument "Moated site at Upsland Farm" (1015439) 1.7km south-east. Historic Landscape Characterisation (HLC) Broad type: Enclosed land; HLC Type: Modern improved fields; Undesignated archaeology in this area includes evidence for prehistoric activity including pits and ditches, and worked stone. Romano-British pottery has also been recovered alongside human remains as well as later medieval pottery and ditches. Site is partially screened by topography and vegetation so is not readily visible. Site contributes to landscape	✓		✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>setting of a monument as medieval and post medieval farming landscape. Non-designated assets inculcate a potential for unidentified prehistoric assets which could form part of the significance of the cursus. The site is not on the line of the cursus, but is visible in views from cursus towards round barrow.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the early prehistoric period onwards.</p> <p>Local effects Increased traffic flows on B6267 may create more intrusive noise and make the buildings less viable due to reduced property values, although the traffic assessment notes no net increase in traffic. The access point is away from the village, however appropriate traffic mitigation should eliminate this impact⁸.</p> <p>Removal of sites landscape context and permanent replacement of agricultural land with invasive wetland landscape in long views from the monument may detract from designation significance. This is considered to be a minor negative effect.</p> <p>As this allocation site is a smaller part of a larger area of similar character type, the proposed extraction is unlikely to have a major impact upon the HLC of the immediately surrounding area, although it is acknowledged that within the site the HLC will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>A site level assessment of potential impacts to designated heritage assets in the vicinity of the allocated site has been undertaken. A summary of potential impacts and a significance of effect rating is provided below:</p> <ul style="list-style-type: none"> Scheduled Monument “Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow” –the removal of landscape context and permanent replacement of agricultural land with open water in long views from the monument may detract from designation significance. This is considered to be a minor negative effect on significance. Landscaping measures may be able to reduce some of the effects once the site is 							

⁸ Measures to ensure traffic does not turn right onto B6267 through the village

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>exhausted, but without a detailed plan, this is difficult to quantify.</p> <ul style="list-style-type: none"> Five Grade II Listed Buildings in Nosterfield Village between 680m and 880m south. “The Freemasons Arms, Chapel Row X 2, Village Farmhouse and Kiln Farmhouse” – continued traffic flows on B6267 will extend the existing noise impacts by the lifespan of the site. The access point is away from the village, so this is considered a minor negative effect on significance. Measures to ensure minimum traffic movement through the village would remove this effect on significance. <p>The site has been archaeologically evaluated and it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. The results of the field evaluation have provided certainty about the nature and significance of below ground deposits. It is assumed that the archaeological impact will occur throughout the duration of extraction for however many years this will be. It is assumed that mineral extraction will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant. However it is expected that investigation works required by the Joint Plan Policy D08 (Historic Environment) – ‘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 before or during development.’ Would result in an overall minor negative effect⁹.</p> <p>The impact upon HLC is not felt to be significant.</p> <p>Cumulative landscape change with existing quarries to south and proposed Oaklands (MJP07) site to the west.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

⁹ Comprehensive archaeological and paleoenvironmental investigation may provide information to enhance the significance of the monument by adding to our knowledge of the past landscape.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks, AONBs: Nidderdale AONB 3.6km west; Heritage Coast: None within 10km; Inheritance Tax Exemption Land (ITE): Norton Conyers 4.7km south-east.</p> <p>National Character Area (NCA): Southern Magnesian Limestone; North Yorkshire Landscape Character Assessment (NYLCA): Area 6- Magnesian Limestone Ridge; District LCA: Area 5c in Hambleton LCA - Intensively farmed lowland (open);</p> <p>Intrusion: Undisturbed; Light pollution: the site ranges from <math><0.25</math> to 1NanoWatts/ cm²/ sr¹⁰.</p> <p>Local effects No impact in terms of designated landscapes, an Environmental Statement in support of the planning application (NY/2011/0242/ENV) for a similar site assesses the landscape character setting as being of moderate sensitivity. However, the landscape is also sensitive because of the proximity to Thornborough Henges, although historic quarrying has had a greater adverse impact than extraction from this site is likely to have. The Environmental Statement records an impact on the setting of the Henges as negligible/minor.</p> <p>The site is closest to Nosterfield (around 850m to the south-west), but the village is already affected by existing quarrying at Nosterfield Quarry, including the Ladybridge Farm extension. It is likely to be visible in the middle distance from parts of Well, where there are residential properties on sloping ground to the south west of the village.</p> <p>The wider area is generally tranquil, but the immediate locality is affected by active quarrying, mineral processing, and associated traffic. In terms of urban intrusion the wider landscape is assessed as undisturbed by the Campaign to Protect Rural England (CPRE), but on closer inspection it has been much affected by current and previous quarrying which has introduced industrial processes and artificial landforms. Quarry traffic is unlikely to affect character as there is already quarry traffic.</p>	✓	✓	✓	✓	--	-	0

¹⁰ Light pollution and dark skies are measured on a scale <math><0.25</math> (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>In the short term there would be a significant further loss of historic landscape, productive farmland, hedgerows and hedgerow trees, and the timescale for the operation of the processing plant would be extended. There would be a possible permanent best and most versatile (Grade 3) and the landscape would be affected by the loss of the original route of Ings Goit. The cumulative impacts with adjoining areas of disturbance would be most apparent and it is considered that extensive development in this area would lead to a loss of legibility of the landscape. In the medium term, these same impacts would be on-going, though as restoration of adjoining areas continues, and mitigation becomes more effective, visual impact could reduce. In the long term, the 'restored' area would become integrated with adjoining areas of new landscape including wetland habitat.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The site is close to the A1(M) giving reasonably good access to York, Leeds and Harrogate and Teesside (though its central location does not align it with one specific market area).</p> <p>Local effects The estimated mineral reserve at this site is 2.3 million tonnes of sand and gravel, with this potentially being made available to the market over the lifetime of the site This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight. However, the extraction of minerals is not considered a sustainable industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short term (the five years the site would be operational), with a neutral effect in the medium and long term following closure of the site.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	+	0	0
13. Maintain and enhance the viability and vitality of local	<p>Proximity of factors relevant to community vitality / viability Tanfield Index of Multiple Deprivation (IMD) Area is not in most deprived 20%, Nosterfield is the nearest settlement (850m south). The following significant settlements are within 5km: Well, Nosterfield, Snape, Kirklington, West Tanfield, Carthorpe, Burneston (all Hambleton), North Stainley (Harrogate District). Snape is a Service Village (to which</p>		✓	✓	✓	+	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>Hambleton Local Plan Policy CP6 applies (housing at a level appropriate to the needs of local communities) and Burneston is a Secondary Village (Policy CP6 – new housing in exceptional circumstances). North Stainley is a Group C settlement in Harrogate (only very limited growth).</p> <p>Local effects This site could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth housing stock in nearby settlements. Restoration may provide a useful community resource.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Footpath 10.25/7/1 is 100m north-east; Footpath 10.165/10/2 is 227m north. Common land: The Village Green and Gypsy Moor is c800m south; The Village Green, Nosterfield is 950m south-west.</p> <p>Local effects In the long term restoration will benefit recreation and leisure, but in the short term these footpaths will be potentially be subjected to visual disamenity, though these rights of way will already be subject to significant views of quarries. A minor negative effect is expected in the short term, with a minor positive effect following restoration in the medium and long term.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>		✓	✓		-	+	+
15. To protect and improve the wellbeing, health and safety of local	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlement is Nosterfield 850m South.</p> <p>Local effects There are scattered buildings around this site which may be within range of noise and dust impacts, particularly as soil is stripped or re-profiled (if wet-worked dust may lessen, though some operations</p>		✓	✓	✓	-	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>such as drying may also generate dust). Nosterfield should be out of range of significant impacts, though this would need to be shown in noise and dust assessments. Restoration may bring some wellbeing benefits.</p> <p>Plan level / regional / wider effects None noted.</p>						?	?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones About 25% of this site is in Flood Zones 2 and 3. About 15% to 20% of the site is subject to surface water flooding, much of which is at 1:30 (3.33%) high risk of flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. Risk is spread in patches across the site.</p> <p>Strategic groundwater flooding maps show that most of the site lies in a 1km square where >25% to <50% of the km square has conditions that might support superficial deposits flooding. The southern tip of the site (about 5% of the area) is in a 1km square where >75% of the km square has conditions that might support superficial deposits flooding. A recent application which included this site showed that extraction would take place below the water table which during the maximum extent of the development would lie at 39m Above Ordnance Datum (AOD) (so that application stated that the site would be wet worked). Working below the water table is a routine element of sand and gravel extraction for many sites.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test¹¹ concluded that the site would</p>	✓	✓		✓	0	0	0

¹¹ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>'Pass', sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events.</p> <p>A site specific flood risk assessment should further consider groundwater flooding and how Sustainable Urban Drainage Systems (SuDS) can be used to drain the site. Drainage of site should not increase flooding elsewhere. In the longer term, restoration to water in the floodplain may be beneficial in terms of reducing flood risk elsewhere in the catchment.</p> <p>Plan level / regional / wider effects None noted.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>		✓	✓		+	+	0
Cumulative / Synergistic effects¹²								
Planning context	<p>Well is about 1.6km west of the site while Nosterfield is about 850m south-west. North Stainley is about 3.5km south, Kirklington is about 3.5km east and Burneston is more distant. Snape is about 2.5km north, Carthorpe is about 2.5km north-east. Snape is a 'Service Village' and 'Well' is 'Secondary Village' in the adopted Hambleton Core Strategy. These settlements lie in the Bedale sub area (which will take 15% of Hambleton's housing between 2016 and 2021). In each sub area two thirds of new housing development will be concentrated in the service centres, while in designated service villages 'new housing will be supported in the designated Service Villages at a level appropriate to the needs of local communities and within defined Development Limits', 20% of employment land will be focussed in the Bedale sub area. No housing or employment allocations are located within 200m of the site.</p>							

¹² Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

	North Stainley is in Harrogate. It is a Group C settlement which will accommodate only very limited growth mainly in the form of sustainable development within their existing built up areas (Policy SG2). There are no predicted cumulative effects arising out of the analysis of district local plans.
Other Minerals and Waste Joint Plan Sites	Four other potential minerals and waste plan sites lie within 5km, MJP07 Oakland Quarry adjacent to the west, MJP14 Ripon Quarry 4.6km south, MJP11 Gebdykes Quarry 4.6km west, MJP10 Potgate Quarry 4.6km south.
Historic minerals and waste sites	In terms of active and dormant sites, 3 active quarries lie within 5km, Nosterfield 700m south-west, Ripon 3.7km south, Gebdykes 4.6km west. Haw Wood dormant sand and gravel quarry lies 4.8km south west. Traffic from this site may combine with other active/future sites en route to the A1(M) which could raise dust, noise, pollution and accident levels either side of the road without mitigation. This would affect a very limited number of receptors however.
Landscape Impacts	Cumulative landscape impacts are considered an issue in this area and combined with other nearby development a major negative cumulative landscape impact is anticipated in the short and early medium term. Impacts in the long term are uncertain depending on restoration.
Biodiversity Impacts	Cumulative impacts were noted under SA objective 1 resulting from existing quarrying at Ladybridge Farm, previous quarrying at Nosterfield Quarry and potential future quarrying. This could cause impacts upon protected species resulting from disturbance to habitats (in particular the Ings Goit watercourse and associated species) and operational impacts such as noise and dust. There is also potential for positive cumulative impacts resulting from habitat restoration schemes that collectively are creating priority habitats and therefore improving the local area in terms of habitat connectivity.
Water Environment	MJP06 and the adjacent MJP07 could lead to cumulative hydrological impacts, particularly relating to the Ings Goit watercourse which passes through both sites. All sites in functional floodplain must remain operational and safe for users in times of flood; result in no net loss of floodplain storage; not impede water flows and not increase flood risk elsewhere.

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, including impacts on: Moor Lane SINC, Ings Goit stream and protected species; potential habitats; presence of invasive species including *Crassula helmsii*; cumulative impact.
- Design to minimise the loss of best and most versatile agricultural land and to protect high quality soil resources
- Design to include landscaping to mitigate impact on heritage assets (Scheduled Monuments including the Thornborough Henges, other potential archaeological remains, Listed Buildings in Nosterfield, Well and Kirklington Conservation areas) and their settings and the impact on villages and local landscape features
- Landscape and visual intrusion issues, including: impact on villages, impact of relocating stream and cumulative impact of increasing areas of open water
- Design to include suitable flood risk assessment ; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate (and in this case, appropriate mitigation for the impact of relocating the stream)
- Appropriate arrangements for the assessment, control of and mitigating the effects of noise and dust, etc.
- Appropriate restoration scheme using opportunities for habitat creation and reconnecting the Henges to their landscape settings, but which is also appropriate to the sites location within the birdstrike safeguarding zone, Any proposal for restoration to agriculture should be tested for viability – e.g. relative to the depth of extraction and requirement for inert material.

MJP07 – Oaklands, near Well

Site Name	Site MJP07 Oaklands, Well, Bedale, Hambleton (XY: 427688 481421)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel as proposed extension to an existing quarry
Size	44.6ha
Proposed life of site	6 years from commencement (estimated date of commencement – approximately 2020 to 2021 (to follow MJP06))
Notes	No detailed design yet, but restoration would be in keeping with the existing Nosterfield Quarry and with the Langwith (MJP06) site, involving creation of a lake, nature conservation, agriculture and forestry.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 9.5km to the west lies the North Pennine Moors SPA/SAC; SSSI: 4.4km to Ripon Parks SSSI, 4.8km to Marr Field Fen SSSI, 5.1km to Hack Fall Wood SSSI; SINC: 14 SINC's lie within 2km. Of these one is located within 500m, Nosterfield Quarry c. 400m south-east. LNR: Nosterfield LNR is 1km to the south.</p> <p>Priority Habitat: Very small area of deciduous woodland and lowland fen shown on map (may be mapping anomaly) overlapping boundary. Deciduous woodland lies adjacent to the site to the east and lowland fen lies adjacent to the site to the south. Ecological networks: Very small area of England Habitat Network around Fox covert in the east of the site. GI: In Bedale sub regional GI network.</p> <p>Site visit recorded hedgerows and standalone trees on site.</p> <p>Local effects Possible impacts upon SINC network likely to be minor and possible to mitigate.</p>	✓	✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The site may have potential impacts upon protected species using the current habitats within and adjacent to the proposed site including badger, nesting birds, foraging bats, water vole, kingfisher. In addition there is a need to consider species using habitats within the restored quarry that might be affected through disturbance e.g. bittern are known to use the reed bed that is adjacent to the proposed site. Habitats affected include Ings Goit watercourse, reed bed (restored quarry), hedgerows and trees.</p> <p>The previously restored minerals site has created priority habitats including reed bed and calcareous grassland. Other priority habitats surrounding the site are found in SINCs and Nosterfield LNR. There are opportunities through appropriate restoration to create priority habitats that will provide habitat connectivity and aid species movement.</p> <p>The current Nosterfield Quarry site is known to have New Zealand Pigmyweed <i>Crassula helmsii</i>, an invasive species, which is notoriously difficult to eradicate. As works to the proposed site are assumed to include working below the water table, and there are hydrological links off site via the Ings Goit watercourse, there is potential that the invasive species could be spread.</p> <p>In the short term there would be potential negative impacts upon habitats and species of conservation concern. Opportunities to create priority habitats that will support species of conservation concern exist, provided that any restoration scheme prioritises biodiversity and long term management of the site as long term objectives of the site (land ownership will be key to successful restoration as long term management is very difficult to secure if the developer does not own or have an agreement in place on the land). In particular here there is the potential to extend the previously created reed bed within the Nosterfield Quarry site.</p> <p>Cumulative impacts may result from existing quarrying at Ladybridge Farm, previous quarrying at Nosterfield Quarry and potential future quarrying. This could cause impacts upon protected species resulting from disturbance to habitats (in particular Ings Goit and its associated species) and operational impacts such as noise and dust. There is also potential for positive cumulative impacts resulting from habitat restoration schemes that collectively are creating priority habitats and therefore improving the local</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>area in terms of habitat connectivity.</p> <p>Plan level / regional / wider effects Considering sources of impacts, pathways and receptors it is considered that there would be no significant impact on the integrity of Natura 2000 sites. It is also considered that there would be no impact upon SSSIs.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors The site lies in a groundwater and surface water NVZ; the site does not lie within or adjacent to a groundwater SPZ. The site is in the Humber RBMP and the SUNO management area. Nearest section of river is Ings Goit from source to Burneston Beck which cuts through site. This has good ecological status and good overall status, with a status objective of good by 2015. No RBMP lakes. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>CAMS: surface water resources are available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Any site is likely to require the diversion of Ings Goit which, without mitigation this could have significant effects on water body status. However, the Environmental Statement in support of the planning application for a site adjacent to the east found that the surface water quality in the watercourse will not be compromised during the operation of the site¹³. Spillages could affect groundwater, particularly as this site would involve working below the water table. Groundwater flow may also be affected. This could affect levels in other water bodies in the vicinity, if there is hydraulic connectivity. An adjacent planning application also highlights the potential for increases in nitrates as a possible eutrophication risk, an issue that could</p>	✓	✓	✓		m-	m-	m-

¹³ Lafarge Tarmac, 2015; Nosterfield Quarry, North Yorkshire – Langwith House Farm Extension. Volume 2 Environmental Statement Revision 2015.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>possibly affect this site also.</p> <p>In the absence of further information with regard to hydrology, significance is rated as moderate negative but with considerable uncertainty as it is likely that at least some hydrological features will be permanently changed. Impacts may lessen over time as restoration restores some hydrological regimes. Impacts may be mitigatable through sound environmental management.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>					?	?	?
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site is close to the A1(M) (4.7km east) giving reasonably good access to York, Leeds and Harrogate and Teesside (though its central location does not align it with a specific market area). Access: Confirmed as being use of existing Nosterfield Quarry access on to B6267 (approximately 500m east of Nosterfield village). Light vehicles: Around 34 two-way movements; HGV Vehicles: Around 200 two-way movements;</p> <p>Net change in daily two-way trip generations: Light vehicles: 0; HGVs: 0. Traffic Assessment Rating: Yellow – <i>‘The MJP07 proposal would maintain traffic levels at the Nosterfield Quarry site and use an established point of access. There would thus be no increase in traffic associated with the proposal however it is recommended that similar routing restrictions to those currently in place are maintained as part of any subsequent planning consent’.</i>¹⁴</p> <p>PRoW: According to Highways Assessment this site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 6.5km north (station at Bedale); Strategic Road: A6108 is 2.5km south; B6267 is a timber route; Canal / Freight waterway: Ripon Canal 10km south.</p>		✓		✓	-	-	0

¹⁴ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects The site would generate significant HGV movements (200 two-way movements per day) though the net overall impact on traffic levels is effectively the same as current levels (though effects will be extended for the duration of this extension after MJP06). Access to the A1(M) is relatively good. HGV movement is acceptable onto B6267, however, minor works may be required to improve the existing access arrangements. It is recommended that similar routing restrictions to those currently in place are maintained as part of any subsequent planning consent.</p> <p>This is scored as a minor negative against the SA objective for the short and medium term as this site would maintain traffic levels at the Nosterfield Quarry site and use an established point of access, during site construction, operation and restoration.</p> <p>No sustainable transport is likely to contribute to the site though a travel plan / traffic assessment will be required. Access to the site may be affected by a Highway Authority improvement scheme. Minor negative to uncertain effects.</p> <p>Plan level / regional / wider effects None noted</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors No AQMAs within 2km. Site does not lie within an hazardous substances consultation zone. The site is around 450m from the nearest settlement, Well, and around 50m from the nearest isolated property. A priority woodland to the east may be a receptor for dust.</p> <p>Local effects The site lies in close proximity to a number of residential receptors which may experience air quality impacts in relation to dust from the site. The adjacent priority woodland may also experience minor dust deposition impacts. However, it is assumed that wet working would take place at the site meaning that dust impacts are less likely, aside from during initial soil stripping and during restoration. Generally, there are few dwellings en-route to the A1(M), so pollution from traffic is very limited. Therefore minor impacts are</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>predicted in the short and medium term during site construction, operation and restoration, with uncertainty noted, depending largely on haulage routes and any mitigation that may be implemented.</p> <p>Plan level / regional / wider effects None noted</p>					?	?	
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC Grade 3. Land instability: not in risk area. Contaminated land: Greenfield site / not applicable.</p> <p>Local effects Up to 44.6ha of possible best and most versatile agricultural land (Grade 3) land may be lost¹⁵. Some of this may be restored however, restoration proposals also include the creation of a lake, forestry and nature conservation land, therefore agricultural land may be permanently lost.</p> <p>Plan level / regional / wider effects The loss of best and most versatile agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered to be a small in relation to the overall agricultural land lost in England per annum to development¹⁶ but could have a small scale effect on national food production capacity.</p> <p>The overall level of contribution to the objective is considered to be moderate negative.</p>	✓	✓	✓		m-	m-	-
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Very small area of deciduous woodland and lowland fen shown on map overlapping boundary. Fox Covert woodland adjacent.</p> <p>Local effects An annual output of 500,000 tonnes of sand and gravel is likely to require 200 HGVs to</p>	✓			✓	m-	m-	+

¹⁵ The best and most versatile agricultural land is ALC Grade 1 to 3a. Based on available mapping the site is located within ALC Grade 3 land, without further investigation it is not known whether it is Grade 3a or 3b. For the purposes of this SA the precautionary principle has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

¹⁶ 44.6ha (assuming all land is BMV) annualised across the 6 year life of the site would be an annual 7.4ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 7.4ha loss would represent a 0.3% contribution to this category of soil loss across England for each year of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>transport it, despite this site's proximity to the A1(M). The site is midway between northern and southern markets. It will therefore make a significant negative contribution to CO₂. Insignificant carbon stores are likely to be lost. Overall the site would have a moderate negative effect over the short and medium, and potential minor positive effect in the long term following restoration.</p> <p>Plan level / regional / wider effects An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken¹⁷.</p>							?
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity¹⁸ of a site About 50% of this site, the central and southern area, is in Flood Zones 2 and 3. About 40% of the site is subject to surface water flooding with approximately 30% at 1:30 (3.33%) high risk of flooding and 10% at 1:100 (1%) medium risk or 1:1000 (0.1%) low risk. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. Risk is concentrated in the centre of the site.</p>	✓			✓	m-	m-	+

¹⁷ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

¹⁸ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Ecological networks: East of site (5% (around Fox Covert)) intersects with the England Habitat Network.</p> <p>Up to 44.6ha of possible best and most versatile land (it is not known whether land is Grade 3a or 3b).</p> <p>Local effects Flooding is considered insignificant to minor negative as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. Climate change is likely to extend the area of flood zones. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively. Fox Covert is already isolated from the surrounding landscape so effects are considered neutral. In the medium and longer term effects restoration may provide benefits through habitat creation and a return to agricultural land.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing</p>		✓		✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
high up the waste hierarchy as practicable	the need to recycle sand and gravel from other locations.							
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Well Conservation Area lies 450m north-west of the site; Registered Parks and Gardens: Thorp Perrow Grade II (1001075) is 2.8km north-west, Hackfall Grade I (DNY895) 5km south-west; Registered battlefields: None within 5km; World Heritage sites: None within 5 km; Scheduled Monuments: ‘Three Round Barrows at Three Hills’ (1015764) is 1.1km south-east, “At Risk” ‘Earth Circles, Cursus, Pit Alignments and Burial Sites near Nosterfield and Thornborough, including Centre Hill round barrow’ (10004912) is 1km south; Grade II Listed Building: “Old School House” (1393103) 940m north-west, Grade II Listed Buildings in Nosterfield Village between 680m and 880m south. “The Freemasons Arms, Chapel Row X 2, Village Farmhouse and Kiln Farmhouse” (1150778, 1315194, 1190346, 1150783 and 1190384).</p> <p>HLC Broad type: Enclosed land; HLC Type: Modern improved fields; Undesignated archaeology in this area includes evidence for prehistoric activity including pits and ditches, and worked stone. Romano-British pottery has also been recovered alongside human remains as well as later medieval pottery and ditches.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the early prehistoric period onwards. Archaeological evaluations within the site, as part of the current planning application, have demonstrated the presence of archaeological features in the southern half of this site which have high archaeological value and are part of, and contribute to, our understanding of the significance of the Thornborough landscape. These remains are of national importance.</p> <p>Site is partially screened by topography and vegetation so is not readily visible. Site contributes to landscape setting of monument as medieval and post medieval farming landscape. Non-designated assets include a potential for unidentified prehistoric assets which could form part of the significance of the cursus. The site is not directly on the line of the cursus, but is very nearby the line and is visible in views from the</p>	✓		✓	✓	m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>northern henge and in views from local vantage points. The site is almost certainly part of the wider ritual landscape of the monument.</p> <p>Local effects Increased traffic flows on B6267 may create more intrusive noise and make the buildings less viable due to reduced property values, although the traffic assessment notes no net increase in traffic. The access point is away from the village, however appropriate traffic mitigation should eliminate this impact¹⁹.</p> <p>A site level assessment of potential impacts to designated heritage assets in the vicinity of the allocated site has been undertaken. A summary of potential impacts and a significance of effect rating is provided below:</p> <ul style="list-style-type: none"> Scheduled Monument “Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow” – removal of ritual landscape context and permanent replacement of agricultural land with open water in views from the monument and loss of potential prehistoric assets may detract from designation significance. Additional traffic through Nosterfield village would increase intrusive noise. This is considered to be a moderate negative effect on significance. It is likely that investigation works could produce positive effects that would partially balance negative impacts. Traffic management would reduce noise impacts. Landscaping of the finished site may reduce impacts however, without detailed design, this is difficult to predict. Overall, it is likely that the remaining impact would be Slight negative effect on significance. Five Grade II Listed Buildings in Nosterfield Village between 680m and 880m south. “The Freemasons Arms, Chapel Row X 2, Village Farmhouse and Kiln Farmhouse” – continued traffic flows on B6267 will extend the existing noise impacts by the lifespan of the site. The access point is away from the village, so this is considered a minor negative effect on significance. Measures to ensure minimum traffic movement through the village would remove this impact. <p>The potential change in groundwater levels in the wider ritual landscape of the henge may damage unknown archaeological remains directly associated with the monument. Removal of ritual landscape</p>							

¹⁹ Measures to ensure traffic does not turn right onto B6267 through the village

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>context and permanent replacement of agricultural land with invasive wetland landscape in views from the monument and loss of potential prehistoric assets may detract from designation significance. Additional traffic through Nosterfield village would increase intrusive noise. This is considered to be a moderate negative effect.</p> <p>As this allocation site is a smaller part of a larger area of similar character type, the proposed extraction is unlikely to have a major impact upon the overall HLC of the immediately surrounding area, although it is acknowledged that within the site the HLC will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>It is assumed that allocating this site would be likely to cause the loss of archaeological remains, with particularly sensitive remains in the southern half of the site, if the site is extracted without mitigation. The results of the field evaluation have provided certainty about the nature and significance of below ground deposits. It is assumed that the archaeological impact will occur throughout the duration of extraction (6 years). It is also assumed that mineral extraction will result in the total destruction of the undesignated archaeological remains without mitigation. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant. However, it is expected that investigation works required by the Joint Plan Policy D08 (Historic Environment) – ‘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 before or during development.’ would reduce this to an overall minor negative effect on archaeology.</p> <p>A landscape and visual impact assessment²⁰ commissioned to look in detail at the potential impact on the landscape and setting of the village of Well from the area which was proposed for discounting at Preferred Options immediately adjacent to the east of the proposed (at Preferred Options) area to be allocated (approximately 330m from Well), concluded that overall, the visual impact on the village of Well and the</p>							

²⁰ ESP Ltd, 2016. Oaklands, Nosterfield Quarry, near Ripon, North Yorkshire – Landscape and Visual Impact Appraisal of a Potential Extension.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Well Conservation Area would be low.</p> <p>The impact upon HLC is not felt to be significant.</p> <p>Cumulative landscape change with existing quarries to south and proposed Langwith Hall Farm site to east.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character No National Parks within 10km, AONBs: Nidderdale AONB 3.7km west; Heritage Coast: None within 10km; ITE Land: None within 5km.</p> <p>NCA: Southern Magnesian Limestone; NY LCA: Area 6 – Magnesian Limestone Ridge'; District LCA: Area 5c in Hambleton LCA - 'Intensively farmed lowland (open)'; Intrusion: Undisturbed; Light pollution: the site ranges from <0.25 to 1NanoWatts/ cm²/ sr²¹.</p> <p>The wider area is generally tranquil, but the immediate locality is affected by active quarrying, mineral processing, and associated traffic. In terms of urban intrusion the wider landscape is assessed as undisturbed by CPRE, but on closer inspection it has been much affected by current and previous quarrying which has introduced industrial processes and artificial landforms</p> <p>Local effects No impact in terms of designated landscapes. However the landscape is also sensitive</p>	✓	✓	✓	✓	--	-	+

²¹ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>because of the proximity to Thornborough Henges, although historic quarrying has had a greater adverse impact than extraction from this site is likely to have.</p> <p>The site will negatively affect the landscape setting of Well, which is just over 450m distant, with parts of the settlement overlooking the site from slopes to the west. A landscape and visual impact assessment²² commissioned to look in detail at the potential impact on the landscape and setting of the village of Well from the area which was proposed for discounting at Preferred Options immediately adjacent to the east of the proposed (at Preferred Options) area to be allocated (approximately 330m from Well), concluded that overall, the visual impact on the village of Well and the Well Conservation Area would be low.</p> <p>The settlement of Nosterfield which is partly surrounded by active and past quarries is unlikely to be affected as partly restored areas of Nosterfield Quarry intervene.</p> <p>The local area has been extensively disturbed by sand and gravel extraction and also limestone quarrying to the west of Nosterfield. Locally its character has been largely changed (this site would result in the loss of another section of valley resulting in the loss of most of the original low lying valley) to an area dominated by wetlands. It would be beneficial from the landscape perspective to retain and enhance some of the existing natural and cultural landscape which has evolved over time, particularly within the setting of local villages. However if this site were to be allocated there could be benefits in taking a strategic approach to the creation of new landscapes, together with the Langwith House Farm, Nosterfield and Ladybridge Farm areas.</p> <p>In the short term there would be a significant further loss of historic landscape, productive farmland, hedgerows and hedgerow trees. This quarry would bring extraction close to the village of Well, and greatly extend the area disturbed by quarrying. The landscape would be further affected by the loss of the original route of Ings Goit. The cumulative impacts with adjoining areas of disturbance would be most apparent and it is considered that extensive development in this area would lead to a loss of legibility of the landscape. In</p>							?
	<p>²² ESP Ltd, 2016. Oaklands, Nosterfield Quarry, near Ripon, North Yorkshire – Landscape and Visual Impact Appraisal of a Potential Extension.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>the medium term, these same impacts would be on-going, though as restoration of adjoining areas continues, and mitigation becomes more effective, visual impact could reduce. In the medium to long term effects there is the potential for benefits with restoration to a natural landscape.</p> <p>Plan level / regional / wider effects None noted.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The site is close to the A1(M) giving reasonably good access to York, Leeds and Harrogate and Teesside (though its central location does not align it with one specific market area).</p> <p>Local effects The estimated mineral reserve at this site is 3.6 million tonnes of sand and gravel²³, with this potentially being made available to the market over the lifetime of the site. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight. However, the extraction of minerals is not considered a sustainable industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short term (the five years the site would be operational), with a neutral effect in the medium and long term following closure of the site.</p>		✓	✓	✓	+	0	0
13. Maintain and enhance the viability and vitality of local	<p>Proximity of factors relevant to community vitality / viability. IMD area is Tanfield: Not in most deprived 20%. Well is the nearest settlement 450m north-west. Nosterfield also lies 600m south. The Hambleton Core Strategy lists Well as a secondary village. Low level of development is allowable in secondary villages as illustrated by policy CP6 in Core Strategy <i>“within the designated secondary villages land will not be allocated for housing, unless there are exceptional circumstances, but proposals for housing will be</i></p>		✓	✓		+	+	+

²³ The estimated reserve which could acceptably be developed at this site is likely to be significantly less as a result of the range of constraints which apply.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p><i>supported within the defined Development Limits where it constitutes infill or other development that is small in scale, or redevelopment or the conversion of buildings. Development outside but adjacent to the Development Limits may be supported where it constitutes an exception to achieve affordable housing'</i></p> <p>Local effects Job opportunities arising from this site are likely to be limited, and while the site would provide a further source of sand and gravel which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. The site is unlikely to either hinder or boost local tourism in the short term although it is considered that opportunities to boost tourism in the area through the proposed restoration scheme. Overall any effect is considered to be minor positive in the short term and a minor positive in the medium and long term.</p> <p>Plan level / regional / wider effects None noted.</p>						?	?
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Footpath 10.165/8/1 runs along western boundary of site and joins footpath 10.165/6/1 which runs c. 130m south of the site. A local footpath lies circa 130m north of the site. No draft common land within 500m (but an area lies 670m south). Village Green listed in Well circa 0.5km to the north-west.</p> <p>Local effects In the long term restoration has the potential to benefit recreation and leisure, but in the short term these footpaths will be subjected to significant visual effects, though these rights of way will already be subject to significant views of quarries. Minor negative.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	+	+
15. To protect and improve the wellbeing,	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Well is the nearest settlement 450m north-west. Nosterfield also lies 600m south. Individual properties: Oaklands 50m north, Oak Tree Farm 470m north, Langwith House 480m north-east. No clinics, health centres or hospitals</p>		✓	✓	✓	-	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
health and safety of local communities	<p>within 1km.</p> <p>Local effects Traffic levels in the area will increase as a result of the allocation however a possible route to the A1(M) avoids the majority of residential receptors. Other amenity impacts including dust, noise and visual impacts are likely to arise in the short and early medium term. Impacts in the medium and long term are positive with restoration.</p> <p>Plan level / regional / wider effects None noted.</p>						?	?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones About 50% of this site, the central and southern area, is in Flood Zones 2 and 3. About 40% of the site is subject to surface water flooding with approximately 30% at 1:30 (3.33%) high risk of flooding and 10% at 1:100 (1%) medium risk or 1:1000 (0.1%) low risk. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. Strategic groundwater flooding maps show that most of the site lies in a 1km square where <25% of the km square have conditions that might support Clearwater flooding. About 25% of the site (the eastern part) lies in a 1km square where >25% to <50% of the km square has conditions that might support superficial deposits groundwater flooding.</p> <p>A recent application for a site (MJP06) immediately to the east of this site showed that extraction would take place below the water table which during the maximum extent of the development would lie at 39mAOD (so that application stated that the site would be wet worked). In addition, sand and gravel working to the south of the site has been restored to water suggesting that groundwater will be an issue at this site too. Working</p>		✓		✓	0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>below the water table is a routine element of sand and gravel extraction for many sites.</p> <p>The 1:20 (5%) event extent mapping for this SFRA shows about 40% of this site is at flood risk²⁴.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test²⁵ concluded that the site would 'Pass', sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. A site specific flood risk assessment should further consider groundwater flooding and how SuDS can be used to drain the site. Drainage of site should not increase flooding elsewhere. In the longer term, should the site be restored to a water use in the floodplain this may be beneficial in terms of reducing flood risk elsewhere in the catchment.</p> <p>Plan level / regional / wider effects None noted.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local Effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel.</p> <p>Plan level / regional / wider effects Output from this site may also support markets outside of the Plan area.</p>		✓	✓		++	++	0
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.							

²⁴ In the Hambleton SFRA, although Flood Zone 3 is defined as being made up of 3 types of land, including functional floodplain and undeveloped areas, maps were not available for review at the time of writing. Hambleton has recently developed a draft revised definition of functional floodplain and, consistent with that revised definition, we consider the 1:20 (5%) extent in this location should be considered 'initial' functional floodplain.

²⁵ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

Cumulative / Synergistic effects ²⁶	
Planning context	<p>Well is about 450m west of the site while Nosterfield is about 600m south. North Stainley is about 3.5km south, Kirklington is about 3.5km east. Snape is about 2.5 km north, Carthorpe is about 2.5 km north-east and Burneston is more distant. Snape is a 'Service Village' and 'Well' is 'Secondary Village' in the adopted Hambleton Core Strategy. These settlements lie in the Bedale sub area (which will take 15% of Hambleton's housing between 2016 and 2021). In each sub area two thirds of new housing development will be concentrated in the service centres, while in designated service villages <i>'new housing will be supported in the designated Service Villages...at a level appropriate to the needs of local communities and within defined Development Limits'</i>. 20% of employment land will be focussed in the Bedale sub area. No housing or employment allocations are located within 200m of the site.</p> <p>North Stainley is in Harrogate. It is a Group C settlement which will accommodate only very limited growth mainly in the form of sustainable development within their existing built up areas (Policy SG2). There are no predicted cumulative effects arising out of the analysis of district local plans.</p>
Other Minerals and Waste Joint Plan Sites	There are four other potential minerals and waste plan sites lie within 5km, MJP06 adjacent to the east, MJP14 Ripon Quarry 4.6km south, MJP11 Gebdykes Quarry 3.4km west, MJP10 Potgate Quarry 4.6km south.
Historic minerals and waste sites	<p>In terms of active and dormant sites, 3 active quarries lie within 5km, Nosterfield sand and gravel quarry is 0.5km south, Ripon sand and gravel quarry is 4km south, and Gebdykes Magnesian limestone quarry is 3.5km west. In addition Haw Wood dormant sand and gravel site lies 4.5km S.</p> <p>Traffic from this site may combine with other active / future sites en route to the A1(M) which could raise dust, noise, pollution and accident levels either side of the road without mitigation. This would affect a very limited number of receptors however.</p>
Landscape Impacts	Cumulative landscape impact is also an issue in this area and combined with other nearby development a major negative cumulative landscape impact is anticipated in the short and early medium term. Impacts in the long term are uncertain depending on restoration.
Biodiversity Impacts	Cumulative impacts were noted under SA objective 1 resulting from existing quarrying at Ladybridge Farm, previous quarrying at Nosterfield Quarry and potential future quarrying. This could cause impacts upon protected species resulting from disturbance to habitats (in particular Ings Goit and its associated species) and operational impacts such as noise and dust. There is also potential for positive cumulative impacts resulting from habitat restoration schemes that collectively are creating priority habitats and therefore improving the local area in terms of

²⁶ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

	habitat connectivity.
Water Environment	MJP07 and the adjacent MJP06 could lead to cumulative hydrological impacts, particularly relating to Ings Goit watercourse which passes through both sites. All sites in functional floodplain must: remain operational and safe for users in times of flood; result in no net loss of floodplain storage; not impede water flows and not increase flood risk elsewhere.
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on Moor Lane SINC, Ings Goit beck and protected species and including measures to address and control of invasive species • Design to mitigate impact and the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources • Design to include landscaping to mitigate impact on heritage assets (Scheduled Monuments including Thornborough Henges, other potential archaeological remains, Listed Buildings in Nosterfield, Well and Kirklington Conservation areas) and their settings and the impact on villages and local landscape features • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate (and in this case, appropriate mitigation for the impact of relocating Ings Goit beck) as appropriate • A suitable traffic assessment to ensure suitable arrangements for access and local roads, including an appropriate a traffic management plan regarding the B6267 and Moor Lane • Appropriate arrangements for control of the effects of noise and dust, etc. • Appropriate restoration scheme using opportunities for habitat creation, but which is also appropriate to location within a birdstrike safeguarding zone. 	

MJP33 – Home Farm, Kirkby Fleetham

Site Name	MJP33 Home Farm, Kirkby Fleetham (XY: 428103 495992)
Current Use	Agriculture and woodland
Nature of Planning Proposal	Extraction of sand and gravel
Size	114.7ha
Proposed life of site	12 years
Notes	<p>The site is allocated on the basis that access to the highway for heavy good vehicles will be obtained via the Killerby site allocation MJP21 and associated access point to the local access road west of site MJP21</p> <p>Proposed new quarry. Mix of restoration after uses may include:</p> <ul style="list-style-type: none"> • Agricultural Land • Wetland areas – shallow lakes, ponds, marshland • Woodland – framework and structure planting • Recreation – fishing and permissive walkways • Hedgerows and copses

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	<p>Proximity of international / national and local designations and key features Natura 2000: 10.5km north-west – North Pennine Dales Meadows SAC; SSSI: 2.7km from nearest SSSI (Swale Lakes); SINC: Great Langton Pond SINC contained within and partly adjacent to site; River Swale, Great Langton to Kiplin (immediately adjacent and a new bridge would cross this watercourse); Park Plantation (within site); Winewall Wood 900m; Kirkby Wood 340m; Poole's Waste 1.8km.</p> <p>UK Priority Habitats: Patch of deciduous woodland on site. Also immediately adjacent (including very slight</p>	✓	✓	✓	✓	m-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
connectivity	<p>overlap) and up to 20m from northern boundary. Deciduous woodland also adjacent to parts of the southern boundary. A traditional orchard is located approximately 45m from the edge of the site.</p> <p>Ancient woodland: Thin strip of ancient woodland touching southern boundary of site, with 3 further patches within 200m of the southern boundary. Site visit noted the following features on site: watercourses, grassland / pasture, arable, woodland /copse, hedgerows, standalone trees. Ecological Networks: circa 20% of site in NY08 Swale Washlands Living Landscape. GI: Regional GI Corridor 'Swale' (R13).</p> <p>Local effects There are potential impacts upon SINC – in particular Park Plantation SINC within the site and River Swale and Great Langton Pond SINC which are adjacent. Park Plantation SINC woodland is un-surveyed SINC and would need to be further assessed.</p> <p>The site is likely to support otter, bats, badger, farmland birds, and other breeding birds and may possibly support water vole and great crested newt. Both Ancient Semi-Natural Woodland (ASNW) and Plantations on Ancient Woodland Sites (PAWS) exist within close proximity to the site and could be affected by the development (e.g. through dust). Mature trees will need to be assessed.</p> <p>Through restoration there is an opportunity to improve habitat networks through the creation of high quality priority habitats (although the loss of certain species/habitats at the site may be difficult to compensate for). However, this will require careful design and long term management. As with other minerals sites, extraction has the potential to result in the creation of deep lakes with limited ecological potential and MoD restrictions limiting the types of restoration that could be implemented.</p> <p>Wet woodland along the river corridor and habitats within the SINC have the potential to be affected by changes in hydrology. Invasive species, including Japanese knotweed and Himalayan balsam are known from this stretch of the river. The proposed development has the potential to increase the spread of these species.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There is also the potential for cumulative negative impacts resulting from further mineral extraction (previous extraction in the area includes Ellerton Quarry, Killerby (currently seeking planning permission – allocated site MJP21), Scorton Quarry and Kiplin Hall Quarry). Loss of farmland and disturbance to the river corridor will affect certain species. Upgrade of the A1 to A1(M) will add to this disturbance. There is also potential for a cumulative impact on nearby Swale Lakes SSSI which should be considered further. There are potential cumulative benefits for certain habitats and species resulting from this site and others in close proximity, provided that an appropriate high quality and well integrated restoration scheme is secured. If wetland habitat were to be proposed, there would be a need for such proposals to consider whether the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p> <p>In summary, in the short term there are potential adverse impacts to habitats and species – including designated sites – Park Plantation SINC within the site and River Swale and Great Langton Pond SINCs which are adjacent. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and necessary long term management.</p> <p><u>Plan level / regional / wider effects</u> No significant effect expected on Natura 2000 or SSSI sites</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site is not in a Nitrate Vulnerable Zone. About 75% (eastern end) is in Source Protection Zone 3. In Humber RBMP SUNO catchment. Nearest water body is 'Swale from Muker Beck to Bedale Beck', which abuts the northern and southern boundaries. Current ecological status is moderate, with overall potential moderate. Objective is good by 2027. No RBMP lakes. Groundwater: Site falls between SUNO Sherwood Sandstone (current overall status poor / good by 2027) and SUNO Magnesian Limestone (overall status: good / objective: good by 2015) groundwater bodies.</p> <p>CAMS: surface water resources available at least 50% of time for most of site. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The Swale could be a receptor for pollutants (such as fuel or soil / silt particles) during flood events though this is a large watercourse so, given the sorts of pollutants that could be generated and the ability of the river to flush and dilute, risk is seen as relatively minor and mitigatable by good site management. A more significant risk is the presence of the quarry in Source Protection Zone 3, which could remove the protection that soils currently offer the aquifer from pollution or physically alter groundwater flow if the site is wet worked. While the Environment Agency would generally object in Source Protection Zone 1 for development that may disturb an aquifer, in Zone 3 the situation is less clear, as the Environment Agency require that <i>'Developers proposing schemes that present a hazard to groundwater resources, quality or abstractions must provide an acceptable hydrogeological risk assessment (HRA) to us and the planning authority. Any activities that can adversely affect groundwater must be considered, including physical disturbance of the aquifer. If the HRA identifies unacceptable risks then the developer must provide appropriate mitigation. If this is not done or is not possible we will recommend that the planning permission is conditioned or object to the proposal'</i>²⁷. Such assessment would also need to consider any effects from restoration.</p>		✓	✓		-	-	-

²⁷ Environment Agency, 2013, Groundwater Protection: Principles and Practice. [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297347/LIT_7660_9a3742.pdf]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Potential impacts are considered minor negative as it is assumed a hydrogeological risk assessment would be required and appropriate mitigation would be provided to mitigate any unacceptable risks identified within the hydrogeological risk assessment.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site lies 1.8km east of the A1(M) giving reasonably good access to York, Leeds and Teesside. Access: via a new bridge over the River Swale and on to the B6271. HGVs would then route west on B6271 to strategic network at a new Catterick junction and improved Scotch Corner. Access towards Northallerton confirmed to be likely to be via B6271 and A1(M) to A684, rather than direct via the B6271; Light Vehicles: 21 daily two-way movements; HGV Vehicles: 128 two-way daily movements.</p> <p>Net change in daily two-way trip generations: Light vehicles: 21; HGVs: 128, Traffic assessment rating: yellow – ‘HGV distribution modelling for MJP33 has shown that the routing to Northallerton and onwards to Teesside could be quicker by turning right out of the site and using the A6271 via Northallerton, the route from the site would take vehicles past small communities and a school along the B6271. It is therefore suggested that a routing agreement is put in place as part of any future planning permission for the site so that all HGV traffic is required to turn left out of the site with the exception of local deliveries.’²⁸</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction</p>		✓		✓	m-	m-	m-

²⁸ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 5.7km east (nearest station Northallerton 7.6km south east); Strategic Road: A1(M) lies 1.8km west of the site; Canal / Freight waterway: Tees Navigation 16km north east.</p> <p>Local effects The site would generate fairly significant amount of additional traffic (HGV movements:128 two-way movements per day, light vehicles 21 two-way movements). The site is allocated on the basis that access to the highway for HGVs will be obtained via the Killerby site allocation MJP21 and associated access point to the local access road west of site MJP21. The traffic assessment found that HGV movements onto the B6171 would be acceptable. Alternative routes via the minor highway network would not be suitable for HGV movement.</p> <p>The traffic assessment also identified potential safety implications in smaller settlements on the traffic route (see SA objective 15).</p> <p>Cumulative effects around the mid Catterick and Leeming Bar junctions with the A1(M) have also been modelled for this site together with other local sites (MJP17, MJP21, and MJP43). This modelling did not find cumulative effects to be significant.</p> <p>The allocated site is unlikely to contribute to sustainable transport modes.</p> <p>Plan level / regional / wider effects None noted.</p>							?
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA.</p> <p>Local effects There are several receptors close to the allocation that could be at risk of dust, particularly during the construction and restoration phases, though less so during the operational phase if this site is</p>		✓	✓		m-	--	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>wet worked (uncertain). Settlements such as Kirkby Fleetham Hall (40m south) and Great Langton (150m north) are particularly close. The removal of an estimated 300,000 tonnes of mineral reserves per annum will generate additional traffic to and from the site (HGV movements:128 two-way movements per day, light vehicles 21 two-way movements), with potential air quality impacts related to vehicle emissions.</p> <p>A dust assessment would be required to establish the significance of impacts. Restoration could ultimately improve air quality by habitats absorbing pollutants such as from the A1(M), though this is not expected to be at a significant level.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification: 80% Grade 2 (very good quality). 10% (along northern and south western boundaries) Grade 3 (good to moderate quality). Circa 10% is Grade 4 (poor quality). Greenfield site – no known risk factors for contaminated land. No known mining subsidence risks.</p> <p>Local effects There is the potential for up to 103ha²⁹ of best and most versatile agriculture land (Grade 2 and 3) will be lost. Restoration to wetlands may permanently remove the productive potential of some of this land.</p>	✓		✓		--	--	--

²⁹ 103ha across the 12 year life of the site would be an annual 8.6ha loss. 2365ha of agricultural land was lost to development in 2014/15 in England. 2365ha of agricultural land was 2014/15 in England. Loss due to this site would represent a 0.4% contribution to this category of soil loss across England for each year of the site. [Source: Gov.uk, 2016. Land Use Change Statistics – Live Tables], 2014 to 2015 [URL: <https://www.gov.uk/government/statistical-data-sets/live-tables-on-land-use-change-statistics>].

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Plan level / regional / wider effects Loss of best and most versatile land cumulatively could have an effect on regional / national food production capacity. At this scale of loss effects are considered to be of relatively high significance.</p> <p>The overall level of effect on the SA objective is considered to be high negative, largely due to locally significant effects.</p>							?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Patch of deciduous woodland on site. Also immediately adjacent (including very slight overlap) and up to 20m from northern boundary. Site visit noted the following features on site: grassland / pasture, woodland /copse, hedgerows, standalone trees.</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the additional traffic using the site would have a minor negative impact on the SA objective, albeit lessened by this site's excellent proximity to the A1(M) and northern markets in particular. Restoration is likely to have some potential as a carbon sink. A large amount of energy will be required for machinery to extract the sand and gravel from the site, with associated emissions and use of natural resources. Overall the site would have a moderate negative effect.</p>	✓	✓		✓	m-	m-	m-
								?
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity³⁰ of a site This site is almost entirely within Flood Zone 3 (approximately 90%). The remainder of the site (about 10%) is either Flood Zone 2 (<10%) or Flood Zone 1 (<5%). Flood defences along the north western boundary of the site may offer some protection (though the standard of protection is not known).</p>	✓		✓	✓	-	-	++

³⁰ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Surface water flooding affects small areas (<10%) of the site, with low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) areas of ponding distributed across the site. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>The Ouse CFMP / Unit: Swale Washlands / Policy 6. Circa 20% of site in NY08 Swale Washlands Living Landscape.</p> <p>Local effects Although site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site offer flood storage to the wider catchment. The element of standoff from the river corridor at this site means it is not likely to hinder species movement as a consequence of climate change.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		-	--	--
9. To minimise waste generation and prioritise management of waste as high up the waste	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
hierarchy as practicable								
10. To conserve or enhance the historic environment	<p><u>Proximity of historic environment receptors</u> Conservation areas: Kirkby Fleetham 750m south; Registered Parks and Gardens: None within 5km; Registered Battlefields: none within 5km; World Heritage Sites: None within 5km; Scheduled Monument 1.7km south. "Motte and bailey castle and medieval settlement earthworks within Hall Garth" (1021103). Scheduled Monument 1.7km north. "Castle Hills medieval motte and bailey castle, and 20th century airfield defences, 700m north east of Oran House"</p>	✓	✓	✓	✓	m-	m-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and its setting, cultural heritage and character	<p>(1020991)</p> <p>Listed buildings: 16 Listed Buildings within 1km (1 Grade I, 13 Grade II and 2 Grade II*). Grade II Listed Building 560m east “Gate Piers Approximately 500 Metres to South West of Kirkby Fleetham Hall” (1174452). Two Grade II* Listed Buildings 760m east “Kirkby Fleetham Hall, Church of St Mary” (1295737, 1150928). Grade II Listed Building 100m west “Hook Car Hill Farmhouse” (1150927). Grade II Listed Building 330m south-east. “North Lowfield Farmhouse” (1150929). Grade II Listed Building 180m east. “Langton Farmhouse” (1315474). Grade II Listed Building 930m north. “Cow Byre Approximately 400 Metres To West of Kiplin Hall” (1315105). Grade I Listed Building and 5 Grade II Listed Buildings associated with it 1km north “Kiplin Hall, Gates and Railings to East of Kiplin Hall” (1315476, 1294767). Grade II Listed Building 460m north. “Kiplin Farmhouse” (1150209). Grade II Listed Building 460m north. “East Gateway and Lodge to Kiplin Hall” (1150207). Grade II Listed Building 780m south “Friars Garth” (1295739). Scheduled Monument 1.6km north-west. “World War II fighter pens and associated defences at former RAF Catterick, 120m south and 340m north east of Oran House” (1020990).</p> <p>Named designed landscapes: About 20% of the site, mainly in the south, overlaps with Kirkby Fleetham Hall.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>HLC Broad type – Enclosed land; HLC Type – Modern improved fields. Undesignated archaeology in this area includes evidence from the prehistoric period onwards. Archaeological material has been recovered including a handful of lithic objects, pottery with notable quantities of medieval material, ceramic building material and two medieval lead weights. The distribution of medieval ceramic is coincident either with areas of ridge and furrow cultivation identified in aerial photographs and with linear anomalies resulting from a magnetometer survey or with the position of Kirkby Lane, which may represent the line of an earlier route.</p> <p>Local effects The HLC type of this area is modern improved fields and as the allocated site is a smaller part of a larger area of similar character type, of which the legibility is fragmentary the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. This effect is not considered to be significant.</p> <p>A site level assessment of potential impacts to designated heritage assets in the vicinity of the allocated site has been undertaken. A summary of potential impacts and a significance of effect rating is provided below:</p> <ul style="list-style-type: none"> • Two Grade II* Listed Buildings 760m east “Kirkby Fleetham Hall, Church of St Mary” (1295737, 1150928) – removal of the existing agricultural setting and replacing it with an industrial landscape and change to curated views. Cumulative impact with other quarries in the area, increasing the industrialisation and the degree of change along the approach to the building. Considered to have a significance of effect Moderate adverse. • Grade II Listed Building 100m west “Hook Car Hill Farmhouse” (1150927) – removal of the agricultural context and replacement with industrial. Cumulative impact with other quarries in the area, increasing the industrialisation and the degree of change along the approach to the building. Considered to have a significance of effect Moderate adverse. • Grade II Listed Building 560m east “Gate Piers Approximately 500 Metres to South West of Kirkby Fleetham Hall” (1174452) – removal of agricultural setting, replacing it with an industrial landscape and change to curated views. Cumulative impact with other quarries in the area, increasing the industrialisation and the degree of change along the approach to the building. Considered to have a Slight adverse effect. 							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The allocated site is considered to have no effect on significance at other designated assets within the search area.</p> <p>In the long term, following restoration the effect is considered to be neutral to heritage assets if the site is restored to agriculture, with a degree of uncertainty (dependent on the restoration scheme adopted).</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has only been partially archaeologically field evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, it is expected that investigation works required by the Joint Plan Policy D08 (Historic Environment) – <i>‘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 before or during development.’</i> would result in an overall minor negative effect.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; AONBs: None within 10km; Heritage Coast: None within 10km; ITE: None within 5km; Local landscape designations: none (however, the site lies partly within the undesignated historic park of Kirkby Fleetham Hall, and to the north of the River Swale it is close to the undesignated historic park of Kiplin Hall).</p> <p>NCA: The site lies within the Vale of Mowbray; NY&Y LCA: The site lies wholly within Landscape Character Type 24: 'River Floodplain'; Hambleton LCA: The site extends over landscape type 5b: 'Intensively Farmed Lowland (simple topography) – intermediate enclosure'; type 3: 'Isolated Minor Landform', and type 6d: 'Linear River Landscapes, River Course with Broad Floodplain (tree-lined)'. Intrusion: Undisturbed³¹. Light pollution: the site ranges from <0.25 to 0.5 NanoWatts/ cm²/ sr³².</p> <p>The site is generally screened, although the flood bank along the River Swale affords a view. It would be overlooked from Kirkby Fleetham Hall.</p> <p>Local effects No impacts on nationally or locally designated landscapes. However, the site lies partly within the undesignated historic park of Kirkby Fleetham Hall (Kirkby Hall on old maps), and to the north of the River Swale it is close to the undesignated historic park of Kiplin Hall. There is a cluster of historic parklands within this part of the Swale corridor, so group value and contribution to landscape character need to be considered. In 1995 the 18th century landscape of Kirkby Fleetham Hall was recommended for inclusion in the Historic England Register and although it was not ultimately designated it merits further assessment and potentially a high degree of protection³³.</p> <p>The cluster of Kirkby Fleetham Hall and St Mary's Church (both Grade II*) and associated buildings and</p>	✓	✓	✓	✓	m-	m-	m-

³¹ Urban intrusion: the area is currently undisturbed, and the majority of the area is cut off by the river and accessed by minor roads. However the B6271 lies close to the northern part of the site.

³² Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32 (brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

³³ The designer was William Aislabie (son of John Aislabie who designed the Studley Royal/Fountains Abbey landscape) who added to the design of Studley Royal and was the designer of Hackfall which has been undergoing restoration and re-evaluation).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>cottages are not included in the Kirkby Fleetham Conservation Area but they were once linked by a drive leading along a wooded ridge to the village, where a pair of lodges near the village green marked the entrance to the grounds³⁴. Park Plantation is still present at the edge of the former park. A track that once continued northwards from the Hall ends at Kirkby Gate, close to the River Swale. Further information is needed and clarification as to whether Kirkby Fleetham Hall could be worthy of designation as a Registered Park and Garden would need to be obtained from Historic England.</p> <p>The site will negatively alter the landscape settings of the cluster of Kirkby Fleetham Hall, St Mary's Church, churchyard and associated cottages, and also the cluster around Kiplin Hall. The site is less than 1km from the current village of Kirkby Fleetham although historically linked, and the village itself is likely to be screened by a wooded ridge. The northern part of the site is close to the small rural village of Great Langton.</p> <p>There would be cumulative effects with the adjoining Killerby site (see MJP21), which also affects undesignated historic parkland at Killerby Hall. The Swale Valley, between Brompton on Swale and Scruton is characterised by a concentration of six historic designed landscapes - Killerby Park, Kirkby Fleetham Park, Kiplin Hall Park, Brough Park, Langton Park and Scruton Park. So far, only Kiplin Hall Park is directly affected by quarrying. There would also be cumulative effects with extraction to the north of the River Swale, at Ellerton and Kiplin Hall Quarries. With so many existing or proposed quarries in the area there are concerns that an artificial landscape (of lakes and restored quarries) will emerge around the River Swale corridor.</p> <p>This is still a tranquil area, although threatened by quarrying at Killerby Hall. Vehicle movements may affect tranquillity / character (currently no quarrying in the area to the south of the River Swale).</p> <p>In summary, the proposed site would have an adverse impact on the setting of Kirkby Fleetham Hall and St Mary's Church, the cumulative effects with the potential Killerby Quarry, and also the potential cumulative</p>							

³⁴ These appear to have still been present in the 1950s, as was the parkland to the east of the Hall.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>effects on the landscape of this part of the River Swale corridor would need further evaluation.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is very close to the A1(M) giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Local effects</u> The estimated mineral reserve at this site is 3.5 million tonnes of sand and gravel, with this potentially being made available to the market over the lifetime of the site. This would make a significant contribution to the minerals requirement of the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). However, the extraction of minerals is not considered a long term industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short and medium term, with a neutral effect in the long term following closure of the site.</p> <p>There are opportunities for restoration of the site, combined with that of other nearby sites to create a minor tourist attraction.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓	✓	✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Index of Multiple Deprivation: Leeming Bar – not in most deprived 20%. Nearest settlement is Kirkby Hall to the south (and surrounded by the site on 3 sides). Hookcar Hill is 50m south; Great Langton is also just 100m north-east, while Kiplin is 450m north. Catterick is 2.6km north-west, Scruton is 3.1 km south, Leeming Bar is 4.8km south, Scorton is 3.8km north. Catterick and Bolton on Swale are in Richmondshire. The other settlements are in Hambleton of which only Leeming Bar is listed in the settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240</p>	✓	✓	✓	✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	houses across this category of settlement). Local effects This site could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth housing stock in nearby settlements. Restoration may provide a useful community resource. Plan level / regional / wider effects None noted.							?
14. To provide opportunities to enable recreation, leisure and learning	Proximity to recreation, leisure and learning receptors Footpath 10.84/9/2 crosses site. Claimed footpath runs adjacent to southern boundary near Kirkby Fleetham Hall. National Cycle Network Route 71 runs along eastern boundary. No common ground or village greens within 500m. Local effects This site would be visible from the National Cycle Network (which may also suffer temporary dust and noise impacts) and would result in the loss of a claimed footpath. There is the potential for improved access in the long term as part of the restoration scheme. Plan level / regional / wider effects None noted.	✓	✓	✓		-	-	m +
15. To protect and improve the wellbeing, health and safety of local	Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlement is Kirkby Hall to the south (and surrounded by the site on 3 sides). Hookcar Hill is 50msouth, Great Langton is also just 100m north-east, while Kiplin is 450m north. Local effects Several receptors are close to this site that are likely receive noise and air quality impacts, particularly during the construction and restoration of the site. Traffic from the site may combine with other	✓	✓	✓		-	-	m +

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>quarries in the vicinity to increase danger on the roads, traffic emissions, vibration and dust, depending on routes taken. Depending on restoration schemes, accessible countryside would have a positive effect on wellbeing.</p> <p>A traffic assessment recommends that traffic accesses the site via MJP21 site so no traffic onto the B6271 where there are receptors. It is also recommended that Personal Injury Collision data is reviewed as part of any future planning application for the MJP33 submission site and appropriate mitigation measures put in place.</p> <p>Plan level / regional / wider effects None noted.</p>							?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones This site is almost entirely within Flood Zone 3 (approximately 90%). The remainder of the site outside of Flood Zone 3 (about 10%) is either Flood Zone 2 (<10%) or Flood Zone 1 (<5%). Flood defences along the north western boundary of the site may offer some protection (though the standard of protection is not known).</p> <p>This site lies across six 1km squares of differing groundwater vulnerability according to the Environment Agency's 'Areas Susceptible to Groundwater Flooding' map. The north-west of the site lies in area where >50% to <75% of the km square has conditions that could support superficial deposits flooding. The south west lies in an area where >25% to <50% of the km square has conditions that could support superficial deposits groundwater flooding. The north east and south east site lies in an area where <25% of the km</p>	✓		✓		-	-	m +

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>square has conditions that might support Clearwater flooding.</p> <p>A nearby site (at Kiplin Hall) has shown that ‘generally the natural water table appears to lie between the levels of 36 metres and 38 metres above Ordnance Datum and therefore the depth to the water is between 1 and 2 metres below the flat lying ground’. With this in mind it is thought that the site is likely to encounter groundwater during extraction. Ouse CFMP / Unit: Swale Washlands – Policy 6.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test³⁵ undertaken for the site concluded that this site would ‘Pass’³⁶. Although the site is water compatible development, the risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site offer flood storage to the wider catchment.</p> <p>It is recommended that prior to development a site specific flood risk assessment should further consider the standard of protection and purpose of flood defences, groundwater flooding and how SuDS can be used to drain the site.</p> <p>Depending on the restoration approach adopted, the site could contribute to reducing flood risk in the area in the long term.</p> <p>Plan level / regional / wider effects None noted.</p>							?

³⁵ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

³⁶ The Sequential Test noted that this is water compatible development, however, MJP43, followed by MJP17 and MJP21 should be considered before this site from a flood risk point of view.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to the supply of sand and gravel.</p> <p>Plan level / regional / wider effects Output from the site may also support markets outside of the Plan area.</p>		✓	✓		++	++	0
Cumulative / Synergistic effects³⁷								
Planning context	<p>The nearest settlement in Hambleton District is Kirkby Hall to the south (and surrounded by the site on 3 sides). Hookcar Hill is 50 metres south, Great Langton is also just 100m north-east, while Kiplin is 450m north. Catterick is 2.6km north-west, Scruton is 3.1km south. Leeming Bar is 4.8km south. Scorton is 3.8km north. Only Leeming Bar is listed in the settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). No Housing or employment Proposals Map allocations are noted within 200m (site does overlap with a SINC site (see SA objective 1)).</p> <p>Catterick and Bolton on Swale are in Richmondshire. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Site allocations not yet finalised in Richmondshire.</p>							
Other Minerals and Waste Joint Plan Sites	Three other MWJP sites lie within 5km: MJP21 adjacent to west, MJP17 2km west, MJP43 3.1km south.							
Historic minerals and waste sites	The area has high archaeological potential and the cumulative loss of this resource in this area could potentially result in a high negative cumulative impact. There are also a number of historic buildings / areas of parkland in this area and cumulative visual / setting impacts are likely to occur.							

³⁷ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Landscape Impacts	In combination with other sites, large areas of the landscape are being irreversibly changed from their natural character, a major negative cumulative impact.
Biodiversity Impacts	Cumulative impacts may occur due to loss of habitats and disturbance to species. Overall this may equate to the loss of an ecological network. In the longer term there are significant opportunities to provide benefits for biodiversity through the creation of priority habitats and the integration of sites in the area so they work as a coherent ecological network.
Water Environment	Several sites are located along the River Swale and it is considered that pollution / sedimentation may have a cumulative impact on this water body without mitigation. Following restoration there is the potential for a major positive impact in relation to the provision of additional flood storage which could have beneficial impacts further down the catchment.
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues. • Design to minimise impacts on best and most versatile agricultural land. • Design of development and landscaping of site to mitigate impact on: heritage assets (Listed Buildings, Conservation Area, archaeological remains and undesignated designed landscapes), local landscape features, and their respective settings and rights of way • Design to include suitable FRA; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate (and in this case, appropriate mitigation for the impact of relocating the stream). • Design to ensure protection of the aquifer. • Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) • Design to include suitable arrangements for access and local roads • Appropriate arrangements for control of and mitigation of the effects of noise and dust, etc. • Appropriate restoration scheme using opportunities for the creation of a coherent habitat network in conjunction with nearby sites and contribution to the parkland setting, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland (as opposed to restoration to agriculture). 	

MJP33 – Home Farm, Kirkby Fleetham – EXCLUDED AREA

Site Name	MJP33 Home Farm, Kirkby Fleetham (XY: 428103 495992)
Current Use	Agriculture and woodland
Nature of Planning Proposal	Extraction of sand and gravel from a new extraction site
Size	75.3ha
Proposed life of site	5 years
Notes	<p>The excluded areas of MJP33 are two separate parcels of land adjacent to the northern and southern boundary of the allocated site MJP33 (for information about the allocated area of MJP33 see Appendix 1 to the Minerals and Waste Joint Plan). They are referred to as the northern area and southern area in this SA:</p> <ul style="list-style-type: none"> • Northern area – would be used for locating processing plant and providing access to a public highway (B6271). • Southern area – would be used for mineral extraction. <p>Proposed new quarry. Mix of restoration after uses may include:</p> <ul style="list-style-type: none"> • Agricultural Land • Wetland areas – shallow lakes, ponds, marshland • Woodland – framework and structure planting • Recreation – fishing and permissive walkways • Hedgerows and copses

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Note: This assessment relates to the excluded areas of land to the north and south of the MJP33 allocated site (see Appendix 1 for the assessment of the allocated area), and where possible, has assessed sustainability effects specific to these excluded areas. However, it is only possible to assess some of the SA objectives in conjunction with the allocated part of the MJP33 site; for example, vehicle movements are assumed to be the same for the excluded and allocated areas of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 10.5km north-west – North Pennine Dales Meadows SAC; SSSI: 3.3km from nearest SSSI (Swale Lakes).</p> <p>SINC: Great Langton Pond SINC (adjacent to the southern area); River Swale, Great Langton to Kiplin (immediately adjacent to the southern area and northern area); Park Plantation (within the southern area); Kirkby Wood SINC (340m south of southern area); Poole's Waste SINC (1.8km south-east of the southern area).</p> <p>Local effects There are potential impacts upon SINC – in particular Park Plantation SINC within the site and River Swale and Great Langton Pond SINC which are adjacent. Park Plantation SINC woodland is un-surveyed SINC and would need to be further assessed.</p> <p>Wet woodland along the river corridor, and habitats within the SINC, have the potential to be affected by changes in hydrology. Invasive species, including Japanese knotweed and Himalayan balsam are known from this stretch of the river. The proposed development has the potential to increase the spread of these species.</p> <p>The site could support otter, bats, badger, farmland birds, and other breeding birds and may possibly support water vole and great crested newt.</p> <p>There is also the potential for cumulative negative impacts resulting from further mineral extraction (previous extraction in the area includes Ellerton Quarry, Killerby (MJP21 – allocated site), Scorton Quarry and Kiplin Hall Quarry). The upgrade of the A1 (M) will add to this disturbance. There is also potential for a</p>	✓	✓	✓	✓	m-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>cumulative impact on nearby Swale Lakes SSSI which should be considered further.</p> <p>Through restoration there is an opportunity to improve habitat networks through the creation of high quality priority habitats (although the loss of certain species/habitats at the site may be difficult to compensate for). However, this will require careful design and long term management. There are potential cumulative benefits for certain habitats and species resulting from this site and others in close proximity, provided that an appropriate high quality and well integrated restoration scheme is secured. If wetland habitat were to be proposed, there would be a need for such proposals to consider whether the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p> <p>In summary, in the short term there are potential adverse impacts to habitats and species – including designated sites – Park Plantation SINC within the site and River Swale and Great Langton Pond SINCs which are adjacent. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and necessary long term management.</p> <p>Plan level / regional / wider effects No significant effect expected on Natura 2000 or SSSI sites.</p>							?
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site is not in a Nitrate Vulnerable Zone. Both excluded areas are within Source Protection Zone 3. In Humber RBMP SUNO catchment. Nearest water body is 'Swale from Muker Beck to Bedale Beck', which abuts the northern area. Current ecological status is moderate, with overall potential moderate. Objective is good by 2027. No RBMP lakes. Groundwater: Site falls between SUNO Sherwood Sandstone (current overall status poor / good by 2027) and SUNO Magnesian Limestone (overall status: good / objective: good by 2015) groundwater bodies.</p> <p>CAMS: surface water resources available at least 50% of time for most of site. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The Swale could be a receptor for pollutants (such as fuel or soil / silt particles) during flood</p>		✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>events though this is a large watercourse so, given the sorts of pollutants that could be generated and the ability of the river to flush and dilute, risk is seen as relatively minor and mitigatable by good site management. A more significant risk is the presence of the quarry in Source Protection Zone 3, which could remove the protection that soils currently offer the aquifer from pollution or physically alter groundwater flow if the site is wet worked. While the Environment Agency would generally object in Source Protection Zone 1 for development that may disturb an aquifer, in Zone 3 the situation is less clear, as the Environment Agency require that '<i>Developers proposing schemes that present a hazard to groundwater resources, quality or abstractions must provide an acceptable hydrogeological risk assessment (HRA) to us and the planning authority. Any activities that can adversely affect groundwater must be considered, including physical disturbance of the aquifer. If the HRA identifies unacceptable risks then the developer must provide appropriate mitigation. If this is not done or is not possible we will recommend that the planning permission is conditioned or object to the proposal</i>'³⁸. Such assessment would also need to consider any effects from restoration.</p> <p>Potential impacts are considered minor negative as it is assumed a hydrogeological risk assessment would be required and appropriate mitigation would be provided to mitigate any unacceptable risks identified within the hydrogeological risk assessment.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					?	?	?
3. To reduce transport miles and associated	<p><u>Proximity of transport receptors</u> The site would be directly accessed from the B6271 on the eastern side of the River Swale. A Joint Plan Traffic Assessment³⁹ estimated that 75% of demand for material from this site would be drawn towards Teesside and Durham. The quickest route to these locations is turning right</p>		✓		✓	--	--	0

³⁸ Environment Agency, 2013, Groundwater Protection: Principles and Practice. [URL: https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/297347/LIT_7660_9a3742.pdf]

³⁹ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
emissions from transport and encourage the use of sustainable modes of transportation	<p>out of the site and using the B6271 to Northallerton and onto Teesside. Given the rural nature of the B6271 the traffic assessment recommends that a routing agreement is put in place so that all HGVs would route west on B6271 to strategic network at a new Catterick junction and improved Scotch Corner. Access towards Northallerton confirmed to be likely to be via B6271 and A1 (M) to A684, rather than direct via the B6271.</p> <p>Currently vehicles accessing the A1 would need to travel approximately 8.5km to the Leeming Bar junction to head south, or 9km to a junction north of Brompton on Swale for vehicles heading north.</p> <p>Light Vehicles: 21 daily two-way movements; HGV Vehicles: 128 two-way daily movements⁴⁰.</p> <p>Net change in daily two-way trip generations: Light vehicles: 21; HGVs: 128, Traffic assessment rating: yellow – <i>'HGV distribution modelling for MJP33 has shown that the routing to Northallerton and onwards to Teesside could be quicker by turning right out of the site and using the A6271 via Northallerton, the route from the site would take vehicles past small communities and a school along the B6271. It is therefore suggested that a routing agreement is put in place as part of any future planning permission for the site so that all HGV traffic is required to turn left out of the site with the exception of local deliveries.'</i></p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 5.7km east (nearest station Northallerton 7.6km south east); Strategic Road: A1 lies 1.8km west of the site; Canal / Freight waterway: Tees Navigation 16km north east.</p>							?
	<p>⁴⁰ Vehicle movements provided by the submitter.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects The site would generate a fairly significant amount of additional traffic (128 two-way HGV movements per day, light vehicles 21 two-way movements). The traffic assessment found that HGV movements onto the B6271 would be acceptable. Alternative routes via the minor highway network would not be suitable for HGV movement and it is recommended that a routing agreement is put in place so that HGVs route via A6136. This would extend the travel distance for HGVs traveling to Teesside. Access to the A1 would also require travelling some distance on the local road network.</p> <p>The traffic assessment also identified potential safety implications in smaller settlements on the traffic route (see SA objective 15).</p> <p>Cumulative effects around the mid Catterick and Leeming Bar junctions with the A1 have also been modelled for this site together with other local sites (MJP17, MJP21, and MJP43). This modelling did not find cumulative effects to be significant.</p> <p>The allocated site is unlikely to contribute to sustainable transport modes.</p> <p>Overall it is considered that the introduction of a relatively large amount of vehicles onto the road network and extended travel distance due to routing restrictions would have a high negative effect on the SA objective.⁴¹</p> <p>Plan level / regional / wider effects None noted.</p>							
	<p>⁴¹ Traffic impacts are considered in context with the overall MJP33 site (allocated and excluded areas).</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA. Nearby settlements include Great Langton (approximately 500m east of the northern area), Kirkby Fleetham (approximately 700m south of the southern area), there are also isolated properties that are close to both areas (40m).</p> <p>Local effects There are several nearby properties that could be at risk of dust, particularly during the construction and restoration phases of the site, though less so during the operational phase if this site is wet worked (uncertain). The removal of an estimated 300,000 tonnes of mineral reserves per annum will generate additional traffic to and from the site (HGV movements: 128 two-way movements per day, light vehicles 21 two-way movements), with potential air quality impacts related to vehicle emissions. As detailed in SA objective 3, it is recommended that a routing restriction is put in place so that HGVs route west along the B6271 from the site. This route would take HGVs through the smaller communities of Bolton-on-Swale and the southern extents of Scorton (including passing Bolton-on-Swale school) and also includes some narrower sections of highway, and there is the potential for adverse air quality impacts to these receptors due to increased vehicle emissions from traffic using the site. Overall the site is considered to have a moderate negative effect on the SA objective.</p> <p>A dust assessment would be required to establish the significance of impacts. Restoration could ultimately improve air quality by habitats absorbing pollutants such as from the A1, though this is not expected to be at a significant level.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		m-	m-	0
						?	?	

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): the southern area is ALC Grade 2 (very good quality); the northern area is Grade 3⁴² (good to moderate quality). Greenfield site – no known risk factors for contaminated land. No known mining subsidence risks.</p> <p>Local effects There is the potential for up to 75.3ha⁴³ of best and most versatile agriculture land (Grade 2 and 3) will be lost. Restoration to wetlands may permanently remove the productive potential of some of this land.</p> <p>Cumulatively if these excluded areas were used for extraction alongside the MJP33 allocated area it could result in up to 178.3ha of the best and most versatile land being lost.</p> <p>Plan level / regional / wider effects Loss of best and most versatile land cumulatively could have an effect on regional / national food production capacity. At this scale of loss effects are considered to be of relatively high significance.</p> <p>The overall level of effect on the SA objective is considered to be high negative.</p>	✓		✓		--	--	--
								?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change. Patch of deciduous woodland on site. Also immediately adjacent (including very slight overlap) and up to 20m from northern boundary. Site visit noted the following features on site: grassland / pasture, woodland /copse, hedgerows, standalone trees.</p>	✓	✓		✓	m-	m-	+

⁴² ALC Grade 3 land is sub-divided into Grade 3a and 3b, with the best and most versatile agricultural land ALC Grade 1 to 3a. Without further investigation it is not known whether Grade 3 land at this site is 3a or 3b and best and most versatile. For the purposes of this SA the precautionary principle approach has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

⁴³ 103ha across the 12 year life of the site would be an annual 8.6ha loss. 2365ha of agricultural land was lost to development in 2014/15 in England. 2365ha of agricultural land was 2014/15 in England. Loss due to this site would represent a 0.4% contribution to this category of soil loss across England for each year of the site. [Source: Gov.uk, 2016. Land Use Change Statistics – Live Tables]. 2014 to 2015 [URL: <https://www.gov.uk/government/statistical-data-sets/live-tables-on-land-use-change-statistics>].

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the additional traffic using the site would have a minor negative impact on the SA objective. A large amount of energy will be required for machinery to extract the sand and gravel from the site, with associated emissions and use of natural resources. Overall the site would have a moderate negative effect.</p> <p>Restoration is likely to have some potential as a carbon sink</p>							?
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity⁴⁴ of a site The northern area is entirely within Flood Zone 3, the southern area is within Flood Zone 3 and 2. Extraction is likely to change the topography of the site where flooding occurs and is likely to change as extraction progresses.</p> <p>The Ouse CFMP / Unit: Swale Washlands / Policy 6.</p> <p>Local effects Although sand and gravel is considered water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site offer flood storage to the wider catchment. The element of standoff from the river corridor at this site means it is not likely to hinder species movement as a consequence of climate change.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>	✓		✓	✓	-	-	++
8. To minimise the use of resources and encourage their re-use	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective during the operation of the</p>	✓		✓		--	--	0

⁴⁴ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and safeguarding	<p>site.</p> <p>Plan level / regional / wider effects None noted.</p>							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Conservation areas: Kirkby Fleetham 750m south. Registered Parks and Gardens: none within 5km. Registered Battlefields: none within 5km. World Heritage Sites: none within 5km. Scheduled Monument 1.7km south. "Motte and bailey castle and medieval settlement earthworks within Hall Garth" (1021103). Scheduled Monument 1.7km north. "Castle Hills medieval motte and bailey castle, and 20th century airfield defences, 700m north east of Oran House" (1020991)</p> <p>Listed buildings: 16 Listed Buildings within 1km (one Grade I, 13 Grade II and two Grade II*). Grade II Listed Building 560m east "Gate Piers approximately 500 Metres to South West of Kirkby Fleetham Hall" (1174452). Two Grade II* Listed Buildings 760m east "Kirkby Fleetham Hall, Church of St Mary" (1295737, 1150928). Grade II Listed Building 100m west "Hook Car Hill Farmhouse" (1150927). Grade II Listed Building 330m south-east. "North Lowfield Farmhouse" (1150929). Grade II Listed Building 180m east.</p>	✓	✓	✓	✓	m-	m-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>“Langton Farmhouse” (1315474). Grade II Listed Building 930m north. “Cow Byre Approximately 400 Metres To West of Kiplin Hall” (1315105). Grade I Listed Building and 5 Grade II Listed Buildings associated with it 1km north “Kiplin Hall, Gates and Railings to East of Kiplin Hall” (1315476, 1294767). Grade II Listed Building 460m north. “Kiplin Farmhouse” (1150209). Grade II Listed Building 460m north. “East Gateway and Lodge to Kiplin Hall” (1150207). Grade II Listed Building 780m south “Friars Garth” (1295739). Scheduled Monument 1.6km north-west. “World War II fighter pens and associated defences at former RAF Catterick, 120m south and 340m north east of Oran House” (1020990).</p> <p>Named designed landscapes: About 20% of the site, mainly in the south, overlaps with Kirkby Fleetham Hall.</p> <p>HLC Broad type – Enclosed land; HLC Type – Modern improved fields. Undesignated archaeology in this area includes evidence from the prehistoric period onwards. Archaeological material has been recovered including a handful of lithic objects, pottery with notable quantities of medieval material, ceramic building material and two medieval lead weights. The distribution of medieval ceramic is coincident either with areas of ridge and furrow cultivation identified in aerial photographs and with linear anomalies resulting from a magnetometer survey or with the position of Kirkby Lane, which may represent the line of an earlier route.</p> <p>Local effects The HLC type of this area is modern improved fields and as the allocated site is a smaller part of a larger area of similar character type, of which the legibility is fragmentary the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. This effect is not considered to be significant.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>A site level assessment of potential impacts to designated heritage assets in the vicinity of the MJP33 allocated site has been undertaken (see MJP33 – Appendix 1 for further details), the assessment identified Moderate adverse effects to two Grade II*, one Grade II listed buildings and Slight adverse effects to one Grade II listed building. The allocated site is expected to have no effect on significance at other designated assets within the search area. It is considered that development of the excluded areas would contribute to the removal of the existing agricultural setting and replacement with an industrial landscape and change to curated views, effects are therefore considered alongside and the same as the MJP33 allocated site.</p> <p>In the long term, following restoration the effect is considered to be neutral to heritage assets if the site is restored to agriculture, with a degree of uncertainty (dependent on the restoration scheme adopted).</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has only been partially archaeologically field evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, it is expected that investigation works required by the Joint Plan Policy D08 (Historic Environment) – ‘<i>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 before or during development.</i>’ would result in an overall minor negative effect.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; AONBs: None within 10km; Heritage Coast: None within 10km; ITE: None within 5km; Local landscape designations: none (however, the site lies partly within the undesignated historic park of Kirkby Fleetham Hall, and to the north of the River Swale it is close to the undesignated historic park of Kiplin Hall).</p> <p>NCA: The site lies within the Vale of Mowbray; NY&Y LCA: The site lies wholly within Landscape Character Type 24: 'River Floodplain'; Hambleton LCA: The site extends over landscape type 5b: 'Intensively Farmed Lowland (simple topography) – intermediate enclosure'; type 3: 'Isolated Minor Landform', and type 6d: 'Linear River Landscapes, River Course with Broad Floodplain (tree-lined)'. Intrusion: Undisturbed⁴⁵. Light pollution: the site ranges from <0.25 to 0.5NanoWatts/ cm²/ sr⁴⁶.</p> <p>The site is generally screened, although the flood bank along the River Swale affords a view. It would be overlooked from Kirkby Fleetham Hall.</p> <p>The cluster of Kirkby Fleetham Hall and St Mary's Church (both Grade II*) and associated buildings and cottages are not included in the Kirkby Fleetham Conservation Area but they were once linked by a drive leading along a wooded ridge to the village, where a pair of lodges near the village green marked the entrance to the grounds . Park Plantation is still present at the edge of the former park. A track that once continued northwards from the Hall ends at Kirkby Gate, close to the River Swale.</p> <p>Local effects No impacts on nationally or locally designated landscapes. However, the site lies partly within the undesignated historic park of Kirkby Fleetham Hall (Kirkby Hall on old maps), and to the north of the River Swale it is close to the undesignated historic park of Kiplin Hall. There is a cluster of historic parklands within this part of the Swale corridor, so group value and contribution to landscape character</p>	✓	✓	✓	✓	m-	m-	m-

⁴⁵ Urban intrusion: the area is currently undisturbed, and the majority of the area is cut off by the river and accessed by minor roads. However the B6271 lies close to the northern part of the site.

⁴⁶ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>need to be considered. In 1995 the 18th century landscape of Kirkby Fleetham Hall was recommended for inclusion in the Historic England Register and although it was not ultimately designated it merits further assessment and potentially a high degree of protection⁴⁷.</p> <p>The site will negatively alter the landscape settings of the cluster of Kirkby Fleetham Hall, St Mary's Church, churchyard and associated cottages, and also the cluster around Kiplin Hall. The site is less than 1km from the current village of Kirkby Fleetham although historically linked, and the village itself is likely to be screened by a wooded ridge. The northern part of the site is close to the small rural village of Great Langton.</p> <p>There would be cumulative effects with the adjoining Killerby site (see MJP21), which also affects undesignated historic parkland at Killerby Hall. The Swale Valley, between Brompton on Swale and Scruton is characterised by a concentration of six historic designed landscapes - Killerby Park, Kirkby Fleetham Park, Kiplin Hall Park, Brough Park, Langton Park and Scruton Park. So far, only Kiplin Hall Park is directly affected by quarrying. There would also be cumulative effects with extraction to the north of the River Swale, at Ellerton and Kiplin Hall Quarries. With so many existing or proposed quarries in the area there are concerns that an artificial landscape (of lakes and restored quarries) will emerge around the River Swale corridor.</p> <p>Vehicle movements may affect tranquillity / character (currently no quarrying in the area to the south of the River Swale).</p> <p>In summary, the proposed site would have an adverse impact on the setting of Kirkby Fleetham Hall and St Mary's Church, the cumulative effects with the potential Killerby Quarry, and also the potential cumulative effects on the landscape of this part of the River Swale corridor would need further evaluation.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

⁴⁷ The designer was William Aislabie (son of John Aislabie who designed the Studley Royal/Fountains Abbey landscape) who added to the design of Studley Royal and was the designer of Hackfall which has been undergoing restoration and re-evaluation).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Urban areas such as York (79km), Leeds (95km) and Teesside (60km) would require travelling relatively long distances from the site, with sections along the local road network (see SA objective 3 for details on transport).</p> <p>Local effects The estimated mineral reserve at this site is 3.5 million tonnes (including the allocated area of MJP33) of sand and gravel, with this potentially being made available to the market over the lifetime of the site. This would make a contribution to the minerals requirement of the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). However, the extraction of minerals is not considered a long term industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. However, the relatively poor accessibility of the site to urban areas results in an overall minor negative effect in the short and medium term, with a neutral effect in the long term following closure of the site.</p> <p>There are opportunities for restoration of the site, combined with that of other nearby sites to create a minor tourist attraction.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓	✓	-	-	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Index of Multiple Deprivation: Leeming Bar – not in most deprived 20%. Nearby settlements include Great Langton (approximately 500m east of the northern area), Kirkby Fleetham (approximately 700m south of the southern area), there are also isolated properties that are close to both areas (40m). Kiplin is 450m north. Catterick is 2.6km north-west, Scruton is 3.1km south, Leeming Bar is 4.8km south, Scorton is 3.8km north. Catterick and Bolton on Swale are in Richmondshire. The other settlements are in Hambleton of which only Leeming Bar is listed in the settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of</p>	✓	✓	✓	✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>settlement).</p> <p>Local effects This site could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth housing stock in nearby settlements. Restoration may provide a useful community resource.</p> <p>Plan level / regional / wider effects None noted.</p>							?
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors. Footpath 10.84/9/2 the southern area. Claimed footpath runs adjacent to southern boundary near Kirkby Fleetham Hall. National Cycle Network Route 71 runs along Lowfield Lane approximately 400m from the excluded areas. No common ground or village greens within 500m.</p> <p>Local effects Development of the southern area would result in the loss/ diversion of Footpath 10.84/9/2 which crosses the site. The excluded areas would be visible from the National Cycle Network (which may also suffer temporary dust and noise impacts). There is the potential for improved access in the long term as part of the restoration scheme.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		m-	m-	+
								?
15. To protect and improve the wellbeing, health and safety of local	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearby settlements include Great Langton (approximately 500m east of the northern area), Kirkby Fleetham (approximately 700m south of the southern area), there are also isolated properties that are close to both areas (40m).</p>	✓	✓	✓		-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>Local effects Several receptors are close to this site that are likely receive noise and air quality impacts, particularly during the construction and restoration of the site. Traffic from the site may combine with other quarries in the vicinity to increase danger on the roads, traffic emissions, vibration and dust, depending on routes taken. Depending on restoration schemes, accessible countryside would have a positive effect on wellbeing.</p> <p>Plan level / regional / wider effects None noted.</p>							?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones The excluded areas are within Flood Zone 3 and 2. Flood defences along the River Swale may offer some protection (though the standard of protection is not known).</p> <p>A nearby site (at Kiplin Hall) has shown that “generally the natural water table appears to lie between the levels of 36 metres and 38 metres above ordnance datum and therefore the depth to the water is between 1m and 2m below the flat lying ground”. With this in mind it is thought that the site is likely to encounter groundwater during extraction. Ouse CFMP / Unit: Swale Washlands – Policy 6.</p> <p>Local effects The proposed processing plant within the northern area lies within an area at risk from a 1 in 20 (5%) annual probability flooding event (considered to be Food Zone 3b - functional floodplain) and is classed as ‘less vulnerable’ development. Planning guidance recommends that development of this type should not be permitted in Flood Zone 3b.</p> <p>The southern area is also in an area at risk from flooding, however sand and gravel extraction is considered water compatible development.</p> <p>The risk of flooding to this site mandates the need for emergency planning. In the longer term there is the</p>	✓		✓		--	--	m +

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>potential for this site offer flood storage to the wider catchment.</p> <p>It is recommended that prior to development a site specific flood risk assessment should further consider the standard of protection and purpose of flood defences, groundwater flooding and how SuDS can be used to drain the site.</p> <p>Depending on the restoration approach adopted, the site could contribute to reducing flood risk in the area in the long term.</p> <p>Overall the risk of flooding is considered to have a high negative effect on the SA objective in the short and medium term and moderate positive effect in long term with uncertainty depending on the restoration scheme.</p> <p>Plan level / regional / wider effects None noted.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to the supply of sand and gravel.</p> <p>Plan level / regional / wider effects Output from the site may also support markets outside of the Plan area.</p>		✓	✓		++	++	0
Cumulative / Synergistic effects⁴⁸								
Planning context	Catterick is 2.6km north-west, Scruton is 3.1km south, Leeming Bar is 4.8km south, Scorton is 3.8km north. Only Leeming Bar is listed in the settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). No Housing or employment Proposals Map allocations are noted within 200m (site does overlap with a SINC site (see SA objective 1)).							

⁴⁸ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

	Catterick and Bolton on Swale are in Richmondshire. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Site allocations not yet finalised in Richmondshire.
Other Minerals and Waste Joint Plan Sites	MJP33 (allocated site) lies adjacent to the excluded areas, MJP21 adjacent to west, MJP17 2km west, MJP43 3.1km south.
Historic Environment	The area has high archaeological potential and the cumulative loss of this resource in this area could potentially result in a high negative cumulative impact. There are also a number of historic buildings / areas of parkland in this area and cumulative visual / setting impacts are likely to occur.
Landscape Impacts	In combination with other sites, large areas of the landscape are being irreversibly changed from their natural character, a major negative cumulative impact.
Biodiversity Impacts	Cumulative impacts may occur due to loss of habitats and disturbance to species. Overall this may equate to the loss of an ecological network. In the longer term there are significant opportunities to provide benefits for biodiversity through the creation of priority habitats and the integration of sites in the area so they work as a coherent ecological network.
Water Environment	Several sites are located along the River Swale and it is considered that pollution / sedimentation may have a cumulative impact on this water body without mitigation. Following restoration there is the potential for a major positive impact in relation to the provision of additional flood storage which could have beneficial impacts further down the catchment.
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues. • Design to minimise impacts on best and most versatile agricultural land. • Design of development and landscaping of site to mitigate impact on: heritage assets (Listed Buildings, Conservation Area, archaeological remains and undesignated designed landscapes), local landscape features, and their respective settings and rights of way • Design to include suitable flood risk assessment (FRA); for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and sustainable urban drainage system as appropriate (and in this case, appropriate mitigation for the impact of relocating the stream). 	

- Design to ensure protection of the aquifer.
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate)
- Design to include suitable arrangements for access and local roads
- Appropriate arrangements for control of and mitigation of the effects of noise and dust, etc.
- Appropriate restoration scheme using opportunities for the creation of a coherent habitat network in conjunction with nearby sites and contribution to the parkland setting, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland (as opposed to restoration to agriculture).

MJP38 – Mill Cottages, West Tanfield

Site Name	MJP38 Mill Cottages, West Tanfield, Ripon (XY 427854 478706)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel from a new extraction site
Size	10.88ha
Proposed life of site	5 years
Notes	Restoration: likely to be mainly to water, but no design yet available.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 9km west - North Pennine Moors SPA / SAC; SSSI: 2.5km south-east - Ripon Parks SSSI; 4.9km south - Cow Myers SSSI; 5km west - Hack Fall Wood SSSI.</p> <p>SINC: Nosterfield LNR (SE27-04) 300m north; West Tanfield Quarry (SE27-08) 70m north-east; 'Henge, Nosterfield' (SE27- 12) Potential SINC - Does Not Qualify - 600m north-east; Camp Wood (SE28-02) Potential SINC - Does Not Qualify 1km north; Phlashedts Lane (SE28-15) Potential SINC - Does not qualify - 1.9km north-west; Nosterfield Lime Kilns (SE28 - 11) 1.9km north-east. Lime Lane, Nosterfield (SE28-06) Deleted SINC 1.6km north-east; Nosterfield Quarry (North) SE28-12 1.6km north-east. Rush Wood, East Tanfield (SE27-09) Pre-existing SINC 1.35km east; The Jetty (SE27-02) 1.4km south-east; Mill Bank (SE37-18) 1.9km south-east; Low Green (SE27-28) Deleted SINC 1.8km south-east; Westwood (Haw Leas) Disused Railway (SE27-29) 1.1km west; Peter Wood (SE27-05) 1.67km west; South Park Wood and Adjacent Grassland (SE27-07) 1.9km west.</p>	✓	✓	✓		-	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>UK Priority Habitats: none on the site or immediately adjacent. Traditional orchards are located approximately 40m south-west, 60m north and 120m north.</p> <p>Site visit: no on site trees / hedgerows noted. However, conifer and hedgerows (along U1531 and C87 roads) noted as boundary features and arable land is present on site.</p> <p>Ecological networks: the site is entirely within River Ure Living Landscapes Corridor NY10; GI: Site entirely within the Ure regional GI corridor.</p> <p>Local effects Hydrological links between the site and West Tanfield Quarries SINC will need to be investigated to determine if any impact is likely.</p> <p>The site is predominantly arable and therefore of low ecological value. There is potential for nesting birds within the site boundary and potential for farmland protected species such as badger and brown hare. There is a small risk of invasive species affecting this site as <i>Crassula helmsii</i> is known from other mineral sites and water bodies in the local area. So if water bodies are created on site and this species moves in it could be transported into the wider environment.</p> <p>There is the opportunity through restoration to create priority habitats of high quality, although these will need careful design to ensure that they are appropriate to the local area and long term management will need to be secured.</p> <p>There may be cumulative negative impact due to disturbance from mineral extraction as other mineral sites are in the area – Nosterfield, West Tanfield Quarries, Potgate and Ripon (at North Stainley). There is also opportunity for cumulative positive impacts if a high quality restoration and long term management can be secured.</p> <p>In summary, in the short term ecological impacts are considered to be low – though this depends on species present and any demonstrated hydrological link to the SINC close by. Impacts range from neutral to minor positive in the medium and long term, as benefit depends on design of restoration and whether long term management can be secured.</p> <p>Plan level / regional / wider effects This site is unlikely to result in a significant effect upon Natura 2000 sites and, provided the River Ure is protected during development, impacts on SSSIs are unlikely (though this will still need investigating).</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site is in a NVZ (groundwater). Not in a groundwater SPZ. Humber RBMP: site in SUNO Management area. Ure from Thornton Steward Beck to River Skell lies 20m south. Current ecological status is moderate. Overall status is moderate. Objective is good by 2027. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015). In Swale, Ure, Nidd and Upper Ouse CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Extracting may expose groundwater to risk such as fuel spills, but these are likely to be readily mitigated. However, without mitigation there are minor risks. No information is provided as to whether working would take place above or below the saturated zone, though it is next to a river so wet working is considered a possibility. As the site is also very close to the Ure, discharges to surface water may potentially act as a pathway for on-site pollutants or increases in turbidity / nutrient loading, so appropriate management measures would be need to be put in place. Wet working may also modify groundwater levels which may impact on flow rates in the river, or levels elsewhere (a pond is visible to the north east). Restoration may have impacts of its own on hydrology, so hydrological survey is needed.</p> <p>Plan level / regional / wider effects There is potential pollution from the site could pass into the wider water environment via surface and groundwater pathways.</p>	✓	✓	✓		-	?	?
3. To reduce transport miles and associated emissions from transport and encourage the	<p>Proximity of transport receptors The site is close to the A1(M) (5.8km to the west) giving reasonably good access to York, Leeds and Teesside. Access: exact location of access not finalised, but site abuts highway on south-west (U1531 unclassified road) and on the north-west side (C87 road).</p> <p>Light Vehicles: 20 two-way trips per day (submitter information); HGV Vehicles: 20 two-way trips per day (submitter information).</p> <p>PRoW: this site is not affected by a registered public right of way.</p>		✓		✓	m-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
use of sustainable modes of transportation	<p>Rail: 12.4km east (nearest station is Thirsk 13km east); Strategic Road: A6108 650m, A1(M) is 5.8km west; Canal / Freight waterway: Ripon Canal 8.5km south.</p> <p>Local effects Access to the existing highway is currently uncertain however the transport assessment has considered HGV movement on to the C87 and considers this to be acceptable. It is likely that works will be required to improve the existing C87 to allow HGVs to operate on this road. A traffic assessment would be required in order to establish the feasibility of transporting material along the River Ure or the use of other forms of sustainable transit. The site would generate approximately 40 vehicles onto the road network daily, while the site is reasonably well located for access to the A1(M) and A6108 there is the possibility that vehicles from the site would need to route through settlements, overall this is considered a moderate negative effect.</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area.</p>					?		
4. To protect and improve air quality	<p>Proximity of air quality receptors No hazardous substance consent sites or AQMAs within 2km.</p> <p>Local effects The Mill and parts of West Tanfield may be within range of dust impacts. This site would generate 20 HGV movements and 20 light vehicle movements daily. These may combine with other lorries depending on routes taken to the A1(M) with potential dust and particulate pollution impacts.</p> <p>Plan level / regional / wider effects No noted effects.</p>		✓	✓		-	0	0
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC Grade 2 (very good quality). Greenfield site - no known risk factors for contaminated land onsite, however an authorised landfill site lies circa 15m north of the site. Coal mining subsidence: none noted.</p> <p>Local effects Potentially 10.88ha of Grade 2 agricultural land would be lost and it is unlikely that this would be restored to agricultural land. This would represent a negative impact.</p> <p>Plan level / regional / wider effects The loss of very good agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered</p>	✓		✓		m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>to be a small in relation to the overall agricultural land lost in England per annum to development⁴⁹ but could have a small scale effect on national food production capacity.</p> <p>Overall effects are considered moderate negative.</p>							
6. Reduce the causes of climate change	<p><u>Proximity of factors relevant to exacerbating climate change</u> Hedgerow boundary features noted during site visit.</p> <p><u>Local effects</u> Climate change is a global issue, although the causes can often be at a local scale. Effects are reported in wider effects below.</p> <p><u>Plan level / regional / wider effects</u> Only small areas of carbon storage habitat, or low carbon storage habitat would be lost, representing an insignificant effect. On-site activities would generate a modest amount of CO₂. In addition, the traffic from this site would over time be minor negative and would therefore lead to climate change impacts, as this site has a slightly longer journey to the A1(M) than some other sites (though has good access to Ripon).</p>	✓			✓	-	-	-
7. To respond and adapt to the effects of climate change	<p><u>Proximity of factors relevant to the adaptive capacity⁵⁰ of a site</u> Approximately 40% of the site is in Flood Zone 3 (mainly in the west of site). Moving east through the site a further 50% is in Flood Zone 2. In terms of surface water flooding there are two small patches (close to eastern boundary) at low risk (1 in 1000) of surface water flooding.</p> <p>Ouse CFMP / Unit: Upper Ure and Swinney Beck / Policy 6.</p>	✓			✓	-	-	+

⁴⁹ 10.88ha annualised across the 5 year life of the site would be an annual 2.18ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 2.18ha loss would represent a 0.09% contribution to this category of soil loss across England for each year of the site.

⁵⁰ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>ALC Grade 2 (very good quality).</p> <p>Ecological networks: Site entirely within River Ure Living Landscapes Corridor.</p> <p>Local effects There appears to be some standoff from the river (albeit a narrow band of riparian habitat), so this site is unlikely to reduce connectivity in the River Ure Living Landscapes Corridor, though could offer some future potential to enhance it and aid species movement and thus species' adaptive capacity.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative. There are positive benefits if the site is returned to agriculture in the long term.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. Overall, an estimate of 500,000 tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively.</p> <p>Plan level / regional / wider effects Considered to be the same as local effects.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects The site would not deal with waste and no details are provided of how waste would be managed on site.</p>		✓		✓	-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
high up the waste hierarchy as practicable	Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste down the waste hierarchy as a result of providing limestone and reducing the need to recycle/ re-use sand and gravel from other locations.							
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Conservation Areas: West Tanfield Conservation Area is 280m west. Registered Parks and Gardens: Norton Conyers (ID 1,001,068) Grade II is 3.8km south-east, Hackfall (ID 1,000,130) Grade I is 3.8km south-west. Registered Battlefields: none within 5km. World Heritage Sites: none within 5km (outside of buffer zone).</p> <p>Scheduled Monuments: 410m north-east 'Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow' (ID 1,004,912); 620m west - 'Tanfield Bridge' (ID- 1,003,681); 820m west - 'Marmion Tower (former gatehouse of Tanfield Castle fortified manor)' (ID 1,011,669), 900m south-east - 'East Tanfield deserted medieval village' (ID 1,016,260); 1.3km north-east - 'Three round barrows at Three Hills 500m north east of Camp House' (ID 1,015,764); 1.3km east - 'Round barrow 425m north west of Rushwood Hall' (ID 1,016,262);</p> <p>Listed buildings: 19 Listed Buildings within 1km (two Grade I and 17 Grade II). Largely located in West Tanfield circa 600m west. The closest listed building is Sleningford Mill (Grade II, NHLE No. 1,150,578) 290m south-east.</p> <p>Named designed landscapes: two unnamed areas within 2km circa 800m south-west and 1.8km south-west. HLC Broad type - Enclosed land / HLC Type – Modern improved fields.</p> <p>Undesignated archaeology: the area includes evidence for significant activity dating from the early prehistoric period onwards. Neolithic and Bronze Age lithics including scrapers, flakes and arrowheads have been found in this area. The projected line of the cursus appears to continue into the allocation site. A number of burials dating to the Neolithic period are also recorded as are numerous Bronze Age round barrows. The allocation area is also in close proximity to the Thornborough Henges.</p> <p>Local effects The mineral development on this site could harm elements which contribute to the</p>	✓	✓	✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>significance of a number of heritage assets in the area including Thornborough Henges, the Scheduled East Tanfield deserted medieval village, West Tanfield Conservation Area and Sleningford Mill which has a Grade II Listed Building.</p> <p>The HLC type of this area is modern improved fields and as this allocation site is a smaller part of a larger area of similar character type, the proposed extraction is unlikely to have a major impact upon the HLC of the immediately surrounding area, although it is acknowledged that within the site the HLC will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>There is high potential for the survival of archaeological remains within the site from the early prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that investigation and extraction would be in line with Joint Plan Policy D08 (Historic Environment) '<i>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 before or during development.</i>', and therefore a negative effect no greater than minor is expected to buried archaeology.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							
11. To protect and enhance the quality and character of landscapes and	<p><u>Proximity of landscape / townscape receptors and summary of character</u> National Park: not within 10km. AONB: Nidderdale 1.9km west; Heritage Coast: none within 10km; ITE: 3.9km south-east is Norton Conyers Inheritance Tax Exemption Land; Locally protected landscape: Not within an area with Plan protection. However, the site is within a Special Landscape Area (Hambleton) shown on Conservation Strategy and a Special Landscape Area in Hambleton LCA.</p> <p>NCA: Southern Magnesian Limestone; NY&Y LCA: Landscape Character Type 24: 'River Floodplain';</p>	✓	✓	✓	✓	--	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
townscapes	<p>Hambleton LCA: Partly 5c – ‘Intensively Farmed Lowland (simple topography) – open’. Disturbance: Northern half is disturbed. Southern half is undisturbed. Light pollution: In 2000 the area was assessed as 48 on a scale of 1-255, with 1 representing maximum darkness. This is a relatively low level of light pollution.</p> <p>Local effects There are no predicted impacts on nationally or locally designated landscapes. However, the site is within 500m of the village of West Tanfield, which is mostly a Conservation Area, and would be visible on the approaches from Thornborough to the north-east, or East Tanfield to the east. It is directly across the River Ure from MJP39 (within Harrogate – discounted site), which would affect the approach from the south, along the A6108.</p> <p>Although the site is set within the River Ure floodplain, it would still be locally prominent as it has public roads on three sides. Overall the area is relatively tranquil but in a transitional location and vulnerable to disturbance from traffic and further mineral extraction⁵¹. Traffic could heighten the existing situation. It is not known how much quarry traffic uses the A6108 at present.</p> <p>The site is not well screened – locally it is open and visible from adjacent roads. It would be screened in more distant views by belts of woodland to the east, riverside vegetation, and hedgerows.</p> <p>The assessment here is very tentative, but it is possible that the 5 years period of extraction is short as it is a relatively small area. Restoration is likely to be a low level wet restoration scheme.</p>					?	?	?

⁵¹ In terms of urban intrusion, the site is in an area which is largely undisturbed as shown on the CPRE map, which is fairly broad. The site itself lies within a wider context of moderately tranquil countryside, but there are extensive areas to the north that have been disturbed by quarrying. Although adjacent areas are now ‘restored’ there are artificial landforms and new landscape features that affect perceptions. The site is also close to the A6108, and to the village of West Tanfield.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<u>Plan level / regional / wider effects</u> No effects noted.							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is close to the A1(M) giving access to York, Leeds and Teesside.</p> <p><u>Local effects</u> This site would ultimately result in 500,000 tonnes of sand and gravel being made available to the market. This would make a modest contribution to the building sector by helping to boost supply of a key building material. The effect overall is considered to be positive in the short and medium term and neutral in the long term as a result to positive of restoration plans, as restoration to recreation may attract limited numbers of visitors to the area, depending on the type of recreational opportunities provided.</p> <p><u>Plan level / regional / wider effects</u> No significant effects noted.</p>		✓	✓		+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD area is Tanfield - not in most deprived 20%. West Tanfield is the nearest settlement, with the larger North Stainley 1.5km to the south-west. North Stainley is a Group C settlement in Harrogate (only very limited growth).</p> <p><u>Local effects</u> This is a relatively small site that would provide limited jobs, so positive effects are limited. Proximity to Thornborough Henges however could have a negative effect on the future tourist potential of this site.</p> <p><u>Plan level / regional / wider effects</u> No effects noted.</p>		✓		✓	-	0	0
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Footpath 15.102/4/1 (part of Ripon Rowel long distance regional route) is 130m south. Bridleway 10.44/6/1 is 520m east. No common land or village greens within 500m - Closest is 'Courby and the Green' common land at 770m east. GI: Site entirely within the Ure regional GI corridor.</p> <p><u>Local effects</u> The Ripon Rowel path is likely to be reasonably well screened from the site due to intervening vegetation along the River Ure. Noise may be a minor problem. The eastern path may well be</p>		✓	✓		-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>used by visitors to Thornborough Henges though this site is unlikely to be visible to them because of intervening woodland. Users of the path may also experience small amounts of dust and noise, particularly in the early stages of soil stripping. As this site is in a GI corridor there is potential to restore it to GI.</p> <p>Plan level / regional / wider effects No effects noted.</p>							
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing There is a school 850m west in West Tanfield. No health centres within 1km. Nearest settlement is West Tanfield 270m west.</p> <p>Local effects Mill Cottages are very close to this site at 50m south. There is also Sleningford water mill 250m south-east. These receptors plus eastern parts of West Tanfield could, without mitigation, be within range of noise and dust, while local roads used by people from West Tanfield could get busier. Effects could be cumulative with MP39 (discounted site).</p> <p>Plan level / regional / wider effects No effects noted.</p>		✓	✓		-	0	0
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Approximately 40% of the site is in Flood Zone 3 (mainly in the west of site). Moving east through the site a further 50% is in Flood Zone 2. In terms of surface water flooding there are two small patches (close to eastern boundary) at low risk (1 in 1000) of surface water flooding. Ouse CFMP / Unit: Upper Ure and Swinney Beck / Policy 6.</p> <p>Local effects Sand and gravel extraction is considered water compatible. However, because a substantial part of the site is at risk of flooding, appropriate safety measures, such as an emergency plan, will need to be adopted. This site, if restored for water storage, could provide some minor benefits in terms of flood storage.</p> <p>Plan level / regional / wider effects No effects noted.</p>	✓	✓	✓		-	+	+
						?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population</u> The site does not conflict with any known allocations in other plans.</p> <p><u>Local effects</u> The site would make a modest contribution to self-sufficiency in the supply of sand and gravel.</p> <p><u>Plan level / regional / wider effects</u> The site may also support markets outside of the Plan area.</p>		✓	✓		+	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
Cumulative effects	<p><u>Cumulative / Synergistic effects</u>⁵²</p> <p><u>Planning context</u>: West Tanfield is the nearest settlement, with the larger North Stainley 1.5km south-west. North Stainley is a Group C settlement in Harrogate (only very limited growth). Harrogate does not have an Allocations Map to support its Core Strategy in place; however checks on the Local Plan 2001 show no conflict with this site. West Tanfield is in the Hambleton LDF. No allocations are within 200m of this site.</p> <p><u>Other Joint Minerals and Waste Plan Sites</u>: MJP39 (discounted site) is 150m west, MJP14 is 3km south-east and MJP10 is 1.8km south.</p> <p><u>Historic Minerals and Waste Plan Sites</u>: Within 2km there are numerous historic minerals applications to the immediate north of the site associated with Nosterfield and West Tanfield quarries, including historic landfilling at West Tanfield. Nosterfield is also an active sand and gravel site. To the south east (from 1.8km away) minerals extraction has historically taken place, and still does take place, at Ripon Quarry.</p> <p>There may be in combination impacts with other traffic from nearby minerals sites. There may be cumulative negative impacts on local species, but cumulative positive impacts for biodiversity through restoration.</p> <p>There may be cumulative negative impacts on biodiversity due to disturbance from mineral extraction as other mineral sites are in the area – Nosterfield, West Tanfield Quarries, Potgate and Ripon (at North Stainley). There is also opportunity for cumulative positive impacts if a high quality restoration and long term management can be secured.</p> <p>In terms of landscape, the site is directly across the River Ure from MJP39 (within Harrogate), which would affect the approach from the south, along the A6108.</p>							
	<p>⁵² Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.</p>							

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues.
- Design to mitigate impacts to groundwater.
- Design to mitigate impact on best and most versatile agricultural land.
- Design of development and landscaping of site to mitigate impact on: heritage assets, local landscape features and their respective settings.
- Design to include suitable flood risk assessment, attenuation and surface water drainage; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate.
- Design to include suitable arrangements for public rights of way and associated mitigation.
- Design to include suitable arrangements for access and local roads.
- Appropriate arrangements for control of and mitigation of the effects of noise and dust, etc.
- Appropriate restoration scheme using opportunities for habitat creation.

MJP43 – Land to West of Scruton

Site Name	MJP43 Scruton (An 'eastern area' on land between Low Street and the west side of Carriage Road Plantation to the north-west of Fox Covert Plantation and south of Fence Dike Lane), and a 'western area' on land between Leases Hall and the west side of Low Street from Roughley Corner to the south side of Low Leases Farm) (428759 491894 eastern area) (428759 491894 western area)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel from a new extraction site
Size	36.2ha
Proposed life of site	32 years (estimated date of commencement 2018)
Notes	Likely to be agriculture with limited wetland areas on the east side of Low Street and agriculture on the west side of Low Street.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	<p><u>Proximity of international / national and local designations and key features</u> Natura 2000: 13.5km north-west - North Pennine Dales Meadows SAC; 13.5km south-west – North Pennine Moors SAC / SPA; SSSI: Nearest SSSI is 6.8 km north (Swale Lakes); SINC: Nearest SINC is 1.3km to south-west (Ings Lane, Crakehall).</p> <p>UK Priority Habitats: Deciduous woodland adjacent to / some overlap with east and north east of site and a</p>	✓	✓	✓		-	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
connectivity	<p>small block is within the northern part of the site.</p> <p>Site visit: the following habitats noted on site – pasture / grassland, arable, woodland / copse, hedgerows, standalone trees; Ecological networks: England Habitat Network (EHN) woodland overlaps eastern edge of north eastern block, and a block of woodland on site is also part of EHN. There is also a very small overlap of EHN woodland in the southern part of site; Green Infrastructure (GI): the eastern 2 blocks of the site in regional Swale GI corridor.</p> <p>Local effects There are unlikely to be any significant effects on SINC. The majority of the site is agricultural – therefore any protected species are likely to be associated with these habitats. Such species would include badger, bats (Low Street is a strong bat foraging route), nesting birds, great crested newts (where there are ponds) and the potential for water vole where water courses are present.</p> <p>There is the potential for this site to affect woodland that is within and adjacent to the site (e.g. through destruction of habitat or deposition of dust). It is not possible to say what the significance of the impact will be without more detail on the woodlands themselves.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>This is an area of relatively low ecological value (although it is of some importance for farmland birds); as such a well-designed restoration scheme that includes the creation of high-quality priority habitats would make a significant contribution to habitat networks in the area. Any restoration should have long-term management secured in order to maximise these benefits. If wetland habitat were to be proposed, there would be a need for such proposals to consider whether the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p> <p>There may be cumulative impacts in terms of disturbance to habitats and species resulting from other developments such as the A1(M) upgrade.</p> <p>To summarise, in the short term, there is a neutral to minor impact resulting from disturbance. The magnitude is dependent on the detail of protected species and habitats. In the medium term, the impact is unknown, though it is assumed the site is still in the extraction phase, where there is no impact on wildlife. In the long term it is assumed the site is restored and being managed. The scale of benefits depends on the degree to which biodiversity is a priority in the restoration and whether long term management has been secured (wetland restoration is not considered to be a priority here). This site lies in the RAF Leeming (aerodrome and technical) consultation zone and therefore the Ministry of Defence would need to be consulted regarding restoring this site for ecological purposes including wetland.</p> <p><u>Plan level / regional / wider effects</u> There are unlikely to be any significant effects on SACs / SPAs or SSSI sites.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Not in an NVZ. About 25% of the western site (on north western edge) is groundwater Source Protection Zone 3. Site is in Humber RBMP in SUNO Management Catchment. It is closest to the 'Swale from Muker BK to Bedale Beck' water body circa 1.8km east. However, water courses drain from the edge of the site (0m) to this water body. Current ecological status is moderate, with overall potential moderate. Objective is good by 2027. No RBMP lakes. Groundwater: SUNO Sherwood Sandstone (Current overall status poor / good by 2027).</p> <p>CAMS: surface water resources available at least 50% of time for most of the site. At low flows new extraction licenses may be more restricted.</p> <p>Local effects To the east the site drains to the 'Swale from Muker BK to Bedale Beck'. This could lead to possible run off from the site (particularly during construction and restoration) or it could change the drainage regime and thus the flow rate of this water body. Moreover, the areas of the site worked below the water table could impact on groundwater, either from removing the protection to the underlying groundwater making pollution possible (e.g. if fuel spilled) or could alter groundwater flow, which would have unknown effects on nearby water bodies. Equally in the areas of the site that are dry worked, removing the protective layer above the groundwater body makes it more vulnerable to pollution from spills etc. The groundwater status is already poor which may increase the significance of this effect to a degree as it may hinder the achievement of Water Framework Directive targets. Detailed survey would be needed to remove this uncertainty.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		m-	m-	m-
							?	?
3. To reduce transport miles and	<p>Proximity of transport receptors Site is proximal to the A1(M) (500m) giving reasonably good access to York, Leeds and Teesside. Access: on the east-bound carriage of Bedale, Aiskew and Leeming Bar Bypass, or onto the more easterly of the two new Leases roundabouts; Light Vehicles: 10 to18 two-way</p>		✓		✓	m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
associated emissions from transport and encourage the use of sustainable modes of transportation	<p>daily movements; HGV vehicles: 90 two-way daily movements & maximum of 130 two-way daily movements.</p> <p>Net change in daily two-way trip generations: light vehicles: 10 to 18; HGVs: 90 to 130. Traffic assessment rating: yellow – ‘<i>The site would access onto the proposed Bedale Aiskew Leeming Bar Bypass or connection junction and thus the traffic impact from the site is not expected to be significant. Modelling does however show that the route towards Teesside, where a substantial part of the workings from this proposal are expected to go, takes approximately the same length of time via the A1 and Minerals and Waste Joint Plan Traffic Assessment A66 as via the A684, through Northallerton and the A19. It is thus suggested that a routing agreement is part of any future planning approval for the site to ensure traffic towards Teesside is routed via the A1 to avoid passing through Northallerton. With the agreement in place, the traffic impacts are shown to be minor and no significant effects are anticipated.</i>⁵³</p> <p>PRoW: this site is affected by a registered PRoW which passes through site and must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: adjacent to the site (nearest station Leeming Bar 750m south); Strategic Road: A684 150m south, A1(M) 500m west; Canal / Freight waterway: Ripon Canal 20km south.</p> <p>Local effects The Site would generate a fairly significant number of vehicle movements although access to the strategic road network is good. Modelling of likely traffic routes in the traffic assessment estimates that 75% of demand from this area is drawn towards Teesside and Durham. Traffic might therefore route via either the A1(M) and A66 or the A684 through Northallerton and the A19. The assessment recommends that a routing agreement should specify the A1(M) route to avoid routing through Northallerton. The traffic assessment also estimates that traffic on the A1(M) slip roads generated by this site would be imperceptible against background levels.</p>							?
	<p>⁵³ Jacobs (2015); Minerals and Waste Joint Plan Traffic Assessment - Final Traffic Assessment.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>HGV movement is acceptable onto Low Street, however, works will be required to improve Low Street and extend existing footway / street lighting to improve safety at the site access. The potential for use of sustainable modes of transport would need to be determined by a site specific traffic assessment/travel plan. In terms of passenger transport additional facilities / service provision would also need to be determined in a site specific traffic assessment. Overall the assessment is uncertain until a traffic assessment has been carried out and the site access route has been finalised.</p> <p>Cumulative effects around the mid Catterick and Leeming Bar junctions with the A1(M) have also been modelled for this site together with other local sites (MJP17, MJP21, and MJP33). This modelling did not find cumulative effects to be significant.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Not within a hazardous substances consent consultation zone. Not within 2km of an AQMA.</p> <p>Local effects The site is expected to be produce 75,000 of tonnes minerals in the first year, rising to 90,000 tonnes annually after three years. This would likely mean a relatively high level of freight traffic resulting from this site – estimated net change in daily two-way trip generations: light vehicles: 10 to 18; HGVs: 90 to 130. If traffic were to route towards the A19 through Northallerton, effects would be much more significant due to the proximity of .receptors (the traffic assessment has recommended that traffic be routed via the A1(M)).</p> <p>There are also several small farms and properties close to the edge of the site as well as Leases Hall, the village of Scruton, and Scruton Grange that may be in range of dust impacts (particularly during construction and restoration phases and depending on the phases of working, though less so during operational phases for the areas of the site that are wet worked).</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		m-	--	m-
						?		?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptor Agricultural Land Classification (ALC): Grade 2 (very good quality). This is a greenfield site. No known risk factors for contaminated land. Not in a development high risk area (coal mining).</p> <p>Local effects It is assumed that 18.1ha of the best and most versatile agricultural land will be lost (Grade 2). However, much of this is likely to be restored to agriculture (subject to passing a test of viability e.g. where extraction below the water table is proposed, a supply of inert material will be necessary, which can</p>	✓	✓	✓		--	--	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>affect the economic viability and timescales of a restoration scheme).</p> <p>Plan level / regional / wider effects Loss of the best and most versatile land agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered to be a small but significant English portion of the annual loss of agricultural land to development⁵⁴.</p> <p>The overall level of contribution to the objective is considered to be high negative in the medium to short term, with neutral in the long term if restored to agricultural use.</p>							?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Deciduous woodland is adjacent to / has some overlap with east and north east of site and a small block is within the northern part of the site. Site visit: the following habitats noted on site – pasture / grassland, woodland / copse, hedgerows, standalone trees.</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and would therefore lead to significant climate change impacts, albeit lessened by this site's excellent proximity to the A1(M). Restoration is likely to have some potential as a carbon sink. A large amount of energy will be required for machinery to extract the minerals from the site, with associated emissions and use of natural resources. Overall the site would have a moderate negative effect.</p>	✓			✓	m-	m-	m-
7. To respond	<p>Proximity of factors relevant to the adaptive capacity⁵⁵ of a site This site is 100% in Flood Zone 1.</p>	✓		✓		0	0	0

⁵⁴ 18.1ha (assuming all land is BMV) annualised across the 12 year life of the site would be an annual 1.5ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 1.5ha loss would represent a 0.06% contribution to this category of soil loss across England for each year of the site.

⁵⁵ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and adapt to the effects of climate change	<p>Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 10% of the site. Ditches and small streams on the site are the focal point for much of the surface water flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>The site lies across three 1km squares on the Environment Agency's 'Areas Susceptible to Groundwater Flooding Map', all of which have details of levels susceptibility to groundwater flooding and are susceptible to Clearwater flooding (<25%).</p> <p>In Ouse CFMP / Unit: Swale Washlands / Policy 6. Ecological networks: EHN woodland overlaps the eastern edge of north eastern part of the site, and a block of woodland on site is also part of EHN.</p> <p>Local effects The site is at low risk of climate change as it is in Flood Zone 1. Although an area of EHN lies on site it forms isolated patches so would not significantly affect the movement envelopes of species under climate change. However, there could be the potential to join these patches up through restoration.</p> <p>Plan level / regional / wider effects None noted.</p>							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		-	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects.</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>					-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation Areas: None within 1km; Registered Parks and Gardens: Thorp Perrow Grade II (ID 1,001,075) 4.9 km south-west; Registered Battlefields: None within 5km; Scheduled Monuments: 2km north 'Motte and bailey castle and medieval settlement earthworks within Hall Garth' (ID 1,021,103); Listed buildings: 10 Listed buildings within 1km (all Grade II). Closest is 15m from site boundary ('Ice House to Leases Hall' (NHLE no. 1,252,653)).</p> <p>Named Designed Landscapes: Scruton Park c570m north-east. Fencote Park 800m north; Holtby Hall 230m west. HLC Broad type - Enclosed land / HLC Type – Modern improved fields. Undesignated archaeology in this area includes evidence for activity and settlement from the prehistoric periods onwards. Several burials dating to the Romano - British period have been found with grave goods including 2</p>	✓	✓	✓		m-	m-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>epaulettes⁵⁶ and a scabbard⁵⁷. It is also believed that Romano-British brooches have been found from this area. An unscheduled barrow lies in close proximity to the site.</p> <p>Local effects The HLC type of this area is modern improved fields and as this allocation site is a smaller part of a larger area of similar character type, the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the HLC will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out. The results of such work would provide more certainty about the nature and significance of below ground deposits. Archaeological field evaluation has been undertaken prior to approval being granted for a Borrow Pit to supply minerals for the construction of the A684 Bedale, Aiskew and Leeming Bar Bypass (planning application: NY/2013/0386/ENV⁵⁸). The evaluation did not identify any archaeological features.</p> <p>It is assumed that the archaeological impact will occur throughout the duration of extraction currently expected to be 12 years. It is assumed that mineral extraction will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant.</p> <p>Plan level / regional / wider effects None noted.</p>							?

⁵⁶ An ornamental shoulder piece

⁵⁷ A sheaf for a sword or knife

⁵⁸ North Yorkshire County Council. Online Planning Register. Available at <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppList.aspx>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Park / AONB: None within 10km; Heritage Coast: None within 10 km; ITE: None within 5km; locally protected landscape: None within 5km.</p> <p>National Character Area: Vale of Mowbray; North Yorkshire Landscape Character Assessment: Landscape Character type 25 (Settled Vale Farmland); Local LCA: Mainly Hambleton 5b, though western block is mostly in 4c.</p> <p>Intrusion: disturbed. Urban intrusion: The site lies within the A1(M) and A684 corridors and the western areas in particular are affected by noise and glimpses of traffic. Light pollution: the site ranges from 0.5 to 2 NanoWatts/ cm²/ sr⁵⁹.</p> <p>Local effects There are no impacts from this site on any nationally or locally designated habitats. The site would, however, affect the approaches to Leeming Bar from minor roads to the north, and Scruton. Northern parts of Leeming Bar are already adversely affected by road construction and commercial development and this would add to the general deterioration in landscape quality. Scruton is a Conservation Area and generally unspoilt, but it may be largely screened visually by plantations.</p> <p>The area is influenced by estates and benefits from sizeable plantations which could help to screen the site and provide a framework for restoration. However, much of the site is open to views into the wider landscape. Quarrying of the areas to the west of Low Street could potentially remove a large part of the moraine which is a local landscape feature that reaches 76 m AOD at Carr Hill, to the north of the site. The settlement of Leeming Bar is sited on this minor ridge, as is Leases Hall.</p> <p>There are views eastwards over the site from Leases Road (Dere Street). The moraine is followed by the A1(M), but in this area the road veers slightly westwards, beyond the highest parts of the ridge, so becomes screened.</p>	✓	✓	✓		m-	m-	0

⁵⁹ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Parts of the site are likely to be visible from the A1(M) and the Bedale, Aiskew and Leeming Bar bypass. Views from the A1(M), which is used by tourists as well as residents and workers, affect perceptions of North Yorkshire. There is a need to enhance the corridors of major routes.</p> <p>Much of the site is visible from Low Street. To the east of Low Street, the site consists of a series of large fields between the road and the line of Fence Dike which is marked by a series of plantation woodlands which are likely to have an estate origin. Carriage Road Plantation was on a carriage track between Scruton Hall and the A1 at Leases Hall. The track is now a PRow / bridleway (10.125/1/1). Within the proposed extraction area, a plantation has been lost – Old Harry Plantation to the north-west of Fox Covert Plantation. Opposite Low Leases Farm, a mixed plantation lies within the proposed extraction area. Its loss would lead to negative effects.</p> <p>A low level restoration scheme would result in a considerable change in landscape character – with some areas of wetland created. It is important that the landscape framework offered by landform and woodland plantations remains, and that a strategic approach is taken.</p> <p>Although the site is not in a particularly tranquil area, it is affected by urban intrusion and moderate light pollution, and the trend is for these to increase with the A1(M) upgrade and construction of the BALB bypass scheme which will cut through the south east part of the site. Character may change as a result of an increase in HGVs on local minor roads.</p> <p>The restoration of the scheme is likely to be to agriculture and therefore the long term effect is assessed as neutral, with a degree of uncertainty.</p> <p>Plan level / regional / wider effects None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> The site is very close to the A1(M) giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Local effects</u> The estimated reserve at this site is 850,000 to 900,000 tonnes of sand and gravel, with this potentially being made available to the market over the lifetime of the site. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). However, the extraction of minerals is not considered a sustainable industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short and medium term, with a neutral effect in the long term following closure of the site.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Index of Multiple Deprivation: Leeming Bar – not in most deprived 20%, Scruton is c.900m east, while Leeming Bar is 650m south. Also within 5km are Aiskew (2km south-west) and Bedale (3.4km south-west). Morton on Swale (2.4km east) and Ainderby Steeple (3.4km east) lie to the east. Leeming Bar is listed in the Hambleton Local Plan settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). Bedale (with Aiskew) is a Service Centre (overall 51% of housing).</p> <p><u>Local effects</u> This site could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth in housing stock in nearby settlements. Restoration may provide a useful community resource.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	+	+	+
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> National Cycle Network Route 71 runs along Low Street (north-south direction) approximately 200m west of the site. Bridleway 10.125/1/1 adjoins this crossing the site west-east. No common land or village greens within 500m. Nearest draft common land is at Little Fencote 1.05km north. GI: The site is in the Regional Swale GI corridor.</p> <p><u>Local effects</u> Bridleway 10.125/1/1 crossing the site would be affected by the proposed allocation; this is considered minor negative effect as the route is likely to be diverted. As the site is restored, impacts would subside and the site could potentially make a contribution to the GI network.</p> <p><u>Plan level / regional / wider effects</u> The National Cycle Network Route 71 may experience visual, dust and noise disturbance making the experience of using it less pleasant.</p>		✓	✓	✓	-	-	0
								?
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> No schools within 1km. No health centres within 1km. Nearest settlement is Leeming Bar 1km south-west.</p> <p><u>Local effects</u> There are isolated properties within possible range of dust and noise impacts. Although nearby settlements are thought to be too distant, they still warrant further assessment. Traffic from the site may combine with local traffic causing delays and a possible reduction in safety, particularly if traffic were to route through Northallerton en route to the A19. Fumes, emissions and vibration generated by site machinery and vehicle movements may also contribute to amenity impacts.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	-	-	0
16. To minimise flood risk and reduce the	<p><u>Proximity to flood zones site</u> This site is 100% in Flood Zone 1.</p> <p>Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 10% of the site. Ditches and small streams on the site are the focal point for much of the surface water flooding. However,</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
impact of flooding	<p>as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>The site lies across three 1km squares on the Environment Agency's 'Areas Susceptible to Groundwater Flooding Map', all of which have details of levels susceptibility to groundwater flooding and are susceptible to Clearwater flooding (<25%).</p> <p>The site is in the Ouse CFMP/ Unit: Swale Washlands / Policy 6.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test⁶⁰ undertaken for the site concluded that this site would 'Pass'. Site is in Flood Zone 1, is water compatible and has only small patches of surface water flooding which would be readily manageable. Considered a neutral impact.</p> <p>Plan level / regional / wider effects None noted.</p>							
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known housing or employment allocations in other plans.</p> <p>Local effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>		✓		✓	m +	m +	m +
Cumulative / Synergistic effects⁶¹								
Planning	Scruton is circa 900m east, while Leeming Bar is 1km south. Also within 5km are Aiskew (2.6km south-west) and Bedale 3.4km south-west.							

⁶⁰ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

⁶¹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

context	Morton on Swale (3km east) and Ainderby Steeple (4.1km east) lie to the east. Leeming Bar is listed in the Hambleton Local Plan settlement hierarchy: it is a Service Village (5% of housing directed to Service Villages). Bedale (with Aiskew) is a Service Centre (overall 51% of housing). No housing or employment allocations in Local Plan within 200m (nearest housing allocation 350m south-west). Catterick and Bolton on Swale are in Richmondshire. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Site allocations not yet finalised in Richmondshire.
Other Minerals and Waste Joint Plan Sites	Three other MWJP sites within 5km – MJP33 (3.4km), MJP21 (3.3km) and MJP17 (3.9km) are all north of the site.
Historic minerals and waste sites	Quarrying occurred to the south-west of the site with a cluster of historic applications around Fairfield Farm (350m south-west) and Leases Farm (370m west / also a landfill site). An historic application also lies to the north at Kirkby Fleetham, while a historic landfill site lies to the south (Blow House Tip, 400m south) and a sludge conditioning plant lies 900m south-east. Leeming Bar Household Waste Recycling Centre lies 600m south-west.

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues
- Design to mitigate impact on best and most versatile agricultural land
- Design to include suitable arrangements for retention or diversion of pipeline (as appropriate)
- Design of development and landscaping of site to mitigate impact on: heritage assets (archaeological remains and Listed Buildings), villages, local landscape features and their respective settings, users of local roads including the A1 (M) and the National Cycle Network.
- Design to include suitable flood risk assessment, attenuation and surface water drainage; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate)
- Design to include suitable arrangements for access and local roads
- Appropriate arrangements for control of and mitigation of the effects of noise and dust, etc.
- Appropriate restoration scheme informed by 'estate influenced setting' (using opportunities for habitat creation, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland), noting that any proposal for restoration to agriculture should be tested for viability – e.g. relative to the depth of extraction and requirement for inert material.

MJP60 – Land to the West of Kirkby Fleetham

Site Name	MJP60 Land to the west of Kirkby Fleetham (between Lumley Lane, Low Street and Todd Lane)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel
Size	Approximately 80ha
Proposed life of site	20 year life
Notes	Proposed new quarry / proposed new access link to A1(M). Possible restoration: Landform and restoration design not finalised as negotiations on-going with landowners, but north end likely to be a lake (to maximise the use of the reserve) but with nature conservation elements (taking account of the MOD requirements), other areas likely to be worked above the water table so may be back to agriculture.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 11km north-west - North Pennine Dales Meadows; 15km west - North Pennine Moors SPA/SAC; SSSI: Only 1 SSSI within 5km: Swale Lakes SSSI - 590m north-west; SINC: 4 SINC Sites within 2km, all to north east: Kirkby Wood (SE29 -05) - potential SINC, does not qualify, 650m NE; Park Plantation (SE29-03) 1.25km north-east; Great Langton Pond (SE29 - 01) 1.5km north-east; River Swale, Great Langton to Kiplin (SE29-04) 1.85km north-east.</p> <p>UK Priority Habitats: 2 small patches of deciduous woodland to east, each around 10 m away. A small patch of traditional orchard lies about 110m north. Site visit: The following features noted on site: pasture /</p>	✓	✓	✓		-	0	+
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>grassland, arable, copse, hedgerows, standalone trees.</p> <p>Ecological networks: Very slight overlap on eastern boundary with England Habitat Network Woodland.</p> <p>Local effects No impacts on SINC sites expected. Protected species associated with the habitats found on site include bats, badger, water vole, great crested newt, birds and brown hare. No woodland appears to exist within the site but there are woodlands adjacent. There are trees – mainly associated with field boundaries.</p> <p>Restoration is noted as being to agriculture for the majority of the site, with a lake with nature conservation elements at the northern end of the site. There are opportunities to create priority habitats for biodiversity. Long term management of this area will be key to the delivery of the benefits. Even agricultural areas can incorporate features for biodiversity such as native trees, hedgerows and field margins. There may be some scope for the recreation of shallow marshy mire which may once have been in this area (the patch of woodland known as ‘The Bog’ could provide inspiration for this). This site lies in Leeming aerodrome and technical consultation zone and therefore the MoD would need to be consulted regarding restoring this site for ecological purposes including wetland.</p> <p>There may be cumulative impacts related to disturbance to species and loss of habitat in conjunction with Killerby (MJP21), Home Farm (MJP33) to the north and MJP43 to the south. If high quality habitat is created, and the predominant after use and the management of the site can be secured, then there is the potential for significant cumulative benefits for biodiversity.</p> <p>In summary, in the short term there are impacts relating to loss of habitat and disturbance to species, while in the long term much depends on the level of biodiversity measures incorporated into the scheme and the degree to which these are secured.</p> <p>Plan level / regional / wider effects No significant effects on Natura 2000 sites or SSSIs.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Not in a Nitrate Vulnerable Zone (NVZ). Eastern part of the site (70% of area) in groundwater Source Protection Zone 3. The site is in the Humber River Basin Management Plan (RBMP) in the SUNO (Swale, Ure, Nidd, Ouse) RBMP Management catchment area. The 'Swale from Muker Bk to Bedale Beck' RBMP water body is close to site at 70m north (current ecological status is moderate and the objective for this water body is good by 2027). No RBMP lakes. Groundwater: SUNO Sherwood Sandstone (current overall status poor / good by 2027).</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The 'Swale from Muker Beck to Bedale Beck' water body could be a receptor for pollutants (such as fuel or soil / silt particles) via Mill Beck or a tributary to the north though there appears to be a physical disconnect from these water courses at least on the surface which may negate many effects. A more significant risk is the presence of a large part of the quarry in Source Protection Zone 3. Quarrying here could remove the protection that soils currently offer the underlying groundwater from pollution, or physically alter groundwater flow if the site is wet-worked. While the EA would generally object in Source Protection Zone 1 for development that may disturb an aquifer, in Source Protection Zone 3 the situation is less clear, as the Environment Agency require a Hydrological Risk Assessment. Such assessment would also need to consider any effects from restoration.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		-	-	-
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p><u>Proximity of transport receptors</u> Site is proximal to the A1(M) giving reasonably good proximity to York, Leeds and Teesside. Access: Confirmed to be onto Lumley Lane (C40) and likely to be then north along Low Street to the junction with the new Local Access Road on the east side of the upgraded A1(M). Discussions would be required with the Highway Authority about what improvements may be required on Low Street.</p> <p>Light Vehicles: 18 (estimate); HGV Vehicles: 121 (estimate); PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 3.5km south (nearest station Leeming Bar 3.5km south); Strategic Road: A1(M) 800m east; Canal / Freight waterway: Tees Navigation 19km north-east.</p> <p><u>Local effects</u> The traffic generated by this site is potentially significant, though it has only a relatively short way to travel to the A1(M). The initial Highways Assessment found that HGV movement is acceptable onto Lumby Lane; however works will be required to improve the existing road at Low Street & Lumley Lane and extend the existing footway / street lighting to improve safety at the site access. Sustainable travel is not likely to contribute to the site. However, the surrounding area may require additional facilities / service provision as determined in a traffic assessment and / or travel plan. Minor negative with some uncertainty until a traffic assessment is carried out.</p> <p>Alternative routes on minor road are not considered suitable for this development.</p> <p><u>Plan level / regional / wider effects</u> None noted</p>		✓	✓		-	-	-
						?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA. Several individual properties lie in close proximity and nearest settlement is Kirkby Fleetham 240m to the north east.</p> <p>Local effects There are several receptors close by that could be at risk of dust (particularly during construction and restoration phases, though less so during operational phase in areas of the site that are wet worked). Settlements such as Kirkby Fleetham and Great Fencote are particularly close while various individual properties dot the surrounding landscape. The removal of 5 million tonnes of material would also lead to traffic impacts, and thus additional dust and particulates, though access to the A1(M) is good, with few potential receptors (houses, farms) en route, depending on the route taken to the A1(M). A dust assessment would be required to establish the significance of impacts. Completion of restoration could ultimately see air quality return to the baseline. Routine measures are likely to control effects.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	-
						?	?	?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification: Circa 90% of site is ALC Grade 2. 10% at eastern edge is Grade 3. Greenfield site. No known risk factors for contaminated land. No known mining subsidence risks.</p> <p>Local effects There is the potential for virtually the whole of this site to be best and most versatile land, which would be lost. Some of the site would be restored to agriculture, however a lake is proposed at the north end of the site and therefore this BMV agricultural land would be permanently lost.</p> <p>Plan level / regional / wider effects 80ha of best and most versatile land is a significant figure which is also arguably of greater than local significance.</p>	✓	✓	✓		--	--	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p><u>Proximity of factors relevant to exacerbating climate change</u> 2 small patches of deciduous woodland to east, each around 10m away. Site visit: The following features noted on site: pasture / grassland, copse, hedgerows, standalone trees.</p> <p><u>Local effects</u> Small patches of habitats with carbon storage potential were found on site. However, their loss would be relatively insignificant in terms of climate change.</p> <p><u>Plan level / regional / wider effects</u> The traffic and level of output from this site would be significant and would therefore lead to significant climate change impacts, albeit lessened by this site's excellent proximity to the A1(M) and northern markets in particular. This would be a cumulative and permanent addition to atmospheric carbon (given the amount of time that CO₂ persists in the atmosphere).</p>	✓			✓	-	--	--
7. To respond and adapt to the effects of climate change	<p><u>Proximity of factors relevant to the adaptive capacity⁶² of a site</u> Site is in Flood Zone 1. Small patches of 1 in 30 year risk across southern part of the site (circa 5% of area) with an additional 2% at 1 in 100 year risk and a further 5% at 1 in 1000 year risk. Ouse Catchment Flood Management Plan: Unit: 'Swale Washlands' / Policy 6; Site in SUNO CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Ecological networks: Very slight overlap on eastern boundary with England Habitat Network woodland.</p> <p><u>Local effects</u> Site is not particularly prone to flooding and only overlaps slightly with the England Habitat Network.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0

⁶² Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
8. To minimise the use of resources and encourage their re-use and safeguarding	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. This impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 5 million tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Conservation Areas: Kirkby Fleetham Conservation Area (Designation ID: DNY1103) lies circa 0.37km to east of site; Registered Parks and Gardens: none within 5km; Registered Battlefields: none within 5km; World Heritage Sites: none within 5km; Scheduled Monuments: 0.37km to the east lies 'Motte and Bailey Castle and Medieval settlement earthworks within Hall Garth' (Designation ID 1,021,103).</p> <p>Listed buildings: circa. 140 m to the north-east is Friars Garth (NHLE No. 1,295, 739) Grade II; 0.39km to east is Lancaster House and attached outbuildings (NHLE no. 1,150,889) Grade II; circa 0.536km to east is 'the Vicarage' (NHLE No. 1,174,431) Grade II; Named designed landscapes: Killerby Hall 1.5km north-west; Kirkby Fleetham Hall 900m north-east. Fencote Park (Designed landscape - unidentified parkland) 540m south-east, Scruton Park (Designed Landscape - unidentified parkland) 900m south-east. Holtby Hall (Designed landscape - country estate) 1.17km south-west.</p> <p>HLC Broad type - Enclosed land / HLC Type – Modern improved fields. HLC Broad type - Enclosed land / HLC Type – Piecemeal enclosure.</p> <p>Undesignated archaeology in this area includes evidence from the prehistoric period onwards. Earliest evidence is likely to comprise Mesolithic flint scatters. The proposed site allocation is close to the route of Dere Street Roman Road. Medieval and post medieval field systems lie just outside of the site boundary and a motte and bailey castle lies to the east.</p>	✓		✓		m-	m-	m-
						?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects The HLC has two recorded types within this area. The first is modern improved fields with the allocation site a smaller part of a larger area of similar character type, of which the legibility is fragmentary. The second type is piecemeal enclosure, again being a smaller part of a larger area of this character type. The legibility is partial; however, the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. This effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, in practice in many cases archaeological remains could be recorded and where necessary preserved in line with development management policy in the Joint Plan.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out. The results of such work would provide more certainty about the nature and significance of below ground deposits.</p> <p>It is assumed that the archaeological impact will occur throughout the duration of extraction for however many years this will be. It is assumed that mineral extraction will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact will therefore be significant.</p> <p>Moreover, there is a conservation area, a scheduled monument and numerous listed building with potential inter-visibility with this site. It will be important for this site to undertake an assessment of the contribution which this site make to the designated heritage assets in its vicinity and what impact the proposed development might have upon their significance.</p> <p>Plan level / regional / wider effects Considered alongside local effects above (i.e. effects on scheduled monument).</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks / AONBs: None within 10km; Heritage Coast: None within 10km; Inheritance Tax Exemption Land (ITE Land): None within 5km; Local landscapes: None within 5km.</p> <p>NCA: Vale of Mowbray; NY Landscape Character Assessment: 25 – ‘Settled Vale Farmland’. Local LCA: Hambleton LCA Area 5b.</p> <p>Intrusion: disturbed. Urban intrusion: disturbed – the site lies within the A1(M) corridor, although it may be partly screened by the ridge formed by a moraine lying between Leeming Bar and the Fleetham Lodge area. Light pollution: In 2000, the level of light pollution was assessed as 49, on a scale of 1-255, with 1 representing maximum darkness, which is relatively low. It may have increased since then due to increased traffic and activity in the A1(M) corridor.</p> <p>Local effects The site would negatively affect the southern and western approaches to Kirkby Fleetham (Conservation Area). A number of other settlements also lie in close proximity to the site. There are potentially significant cumulative impact issues given the size and number of other potential mineral sites in the area between Catterick and Leeming Bar. The site is only 0.6km from Killerby (MJP21), just over 1km from the site at Home Farm, Kirkby Fleetham (MJP33) and just under 1.5km from MJP43 – land to the west of Scruton. Even if phased, this is a lot of disturbance to the landscape. A new access link to the A1(M) would be detrimental to the current perception of relative tranquillity, particularly if permanent. Following restoration, there is potential for the countryside to be marred by future artificial sunken landforms.</p>	✓	✓	✓	✓	--	--	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There is a generally low-moderate level of urban intrusion as assessed by the CPRE, but the area may be experienced as being relatively tranquil as the intrusion is not generally visible.</p> <p>Much of the site is open arable farmland with large fields, with screening dependent on scanty hedgerows. There has been considerable change to the historic field pattern, with much hedgerow loss (further hedgerow loss would result from this development).</p> <p>It is not known whether a processing plant would be established, but there may be potential for a shared plant given the proximity to the Killerby site. However, this could prolong the period of landscape impact. A rolling programme of extraction and restoration may reduce impact in the medium and long term, but even if screened there will be visible impacts. There could be scope for some landscape enhancement to be incorporated into a restoration scheme but much depends on depth of quarrying, etc.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is close to the A1(M) giving reasonably good proximity to York, Leeds and Teesside.</p> <p><u>Local effects</u> This site would ultimately result in 5 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). Restoration, combined with that of other nearby sites might create something of a minor tourist attraction.</p> <p><u>Plan level / regional / wider effects</u> As local effects below.</p>		✓	✓	✓	++	++	++
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Index of Multiple Deprivation (IMD) Leeming Bar (not in most deprived 20%); Nearest settlements are Kirkby Fleetham (240m East) and Great Fencote (390m SE). Catterick is 3.7km north-west, Scruton is 2km south-east. Leeming Bar is 3.1km south and Aiskew is 4.1km south-west. Catterick is in Richmondshire.</p> <p><u>Local effects</u> This is a large site that could support a modest amount of jobs in extraction and freight. It could also supply a useful supply of building materials to support the planned growth in housing stock in nearby, and further afield, settlements. However, proximity to nearby settlements could negatively affect perceptions of these areas by residents and businesses. Restoration may provide a useful community resource. Overall highly negative becoming positive with restoration (though this is uncertain).</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	--	--	+
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Footpath 10.84/2/1 crosses site. Footpath 10.84/3/3 150 metres to east. Footpath 10.84/1/3 is within 40 m of northern edge of site. National Cycle route 71 is 300m to the south. Draft common land in the village of Little Fencote is 425m south-east.</p> <p><u>Local effects</u> One footpath would need to be diverted and another would be impacted by noise, dust and visual impacts. In the longer term rights of way are assumed to be re-instated.</p> <p><u>Plan level / regional / wider effects</u> The National Cycle Network may be visually affected and could suffer occasional dust.</p>		✓	✓	✓	-	-	-
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> Kirkby Fleetham School lies circa 300m from the site boundary. No health centres within 1km. Nearest settlement is Kirkby Fleetham 240m to the north east.</p> <p><u>Local effects</u> Several individual properties lie within potential range of dust and noise while such impacts cannot be ruled out at the nearby settlements of Kirkby Fleetham, Great Fencote and Little Fencote, each of which may suffer from combined impacts from local and quarry traffic potentially increasing risk to pedestrians and cyclists. Fumes, emissions and vibration generated by site machinery and vehicle movements may also contribute to amenity impacts. Routine mitigation will reduce dust impacts in particular. Restoration, if to recreational uses, could be positive in the longer term.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	m-	m-	+
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is in Flood Zone 1. Small patches of 1 in 30 year risk across southern part of the site (circa 5% of area) with an additional 2% at 1 in 100 year risk and a further 5% at 1 in 1000 year risk. Ouse CFMP - Unit: Swale Washlands / Policy 6.</p> <p>Local effects Flooding is relatively small scale at this water compatible site. There is some concern about surface water flooding, but this may well be inconsequential if the site is wet worked, or readily manageable if not. Not significant.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects Considered together with plan wide effects below.</p> <p>Plan level / regional / wider effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the Plan area.</p>		✓		✓	++	++	++
Cumulative / Synergistic effects⁶³								
Planning context	Nearest settlements are Kirkby Fleetham (240m east) and Great Fencote (390m south east). Catterick is 3.7km north-west, Scruton is 2 km south-east. Leeming Bar is 3.1km south and Aiskew is 4.1km south-west. Catterick is in Richmondshire. The other settlements are in Hambleton of which only Leeming Bar is a Service Village (5% of housing directed to Service Villages) and Bedale with Aiskew is a Service Centre (overall 51% of housing). Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). No allocations in Local Plans within 200m.							

⁶³ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Other Minerals and Waste Joint Plan Sites	MJP33 is 960m north, MJP21 is 620m north, MJP17 is 2km east; MJP43 is 1.4km south.
Historic minerals and waste sites	Quarrying occurred to the south-west of the site with a cluster of historic applications around Leases Farm (2km south-west / also a landfill site). An historic application overlaps the site at Kirkby Fleetham, while extraction at the River Swale (granted 1950s) historically took place to the north.
Biodiversity impacts	There may be cumulative impacts related to disturbance to species and loss of habitat in conjunction with Killerby (MJP21), Home Farm (MJP33) to the north and MJP43 to the south. If high quality habitat is created as the predominant after use and the management of the site can be secured then there is the potential for significant cumulative benefits for biodiversity.
Landscape impacts	There are potentially significant cumulative impact issues given the size and number of other potential mineral sites in the area between Catterick and Leeming Bar. The site is only 0.6km from Killerby (MJP21), just over 1km from the site at Home Farm, Kirkby Fleetham (MJP33) and just under 1.5km from MJP43 – land to the west of Scruton. Even if phased, this is a lot of disturbance to the landscape. The majority of the site is productive Grade 2 farmland. A new access link to the A1(M) would be detrimental to the current perception of relative tranquillity, particularly if permanent. Following restoration, there is potential for the countryside to be marred by future artificial sunken landforms.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular protected species and habitats; • Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources; • Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels); • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation including SuDS on groundwater supplies; • A transport assessment is required; • Hydrological assessment including to determine there will be no risk to groundwater Source Protection Zone; • Design to include suitable arrangements for avoidance of impacts on nearby public right of way and / or suitable diversions put in place; • Archaeological field evaluation and survey of impacts on historic assets (consider site's contribution to the significance of historic assets) and suitable mitigation strategy to be put in place; • Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan; • Appropriate arrangements for control of and mitigation of the effects of noise, dust; • Appropriate restoration scheme using opportunities for habitat creation. 	
While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain (for instance in relation to landscape). The Plan's decision has been to discount this site.	



Appendix 3c: Assessment of Sites in Hambleton and Harrogate Districts (Split)

Joint Minerals and Waste Plan

Contents

ALLOCATED SITE			
Reference	Site Name	Type of site	Page
MJP11	Gebdykes Quarry	Extraction of Magnesium limestone	2

DISCOUNTED SITES			
NONE APPLICABLE			

Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

MJP11 Gebdykes Quarry, Near Masham

Site Name	MJP11 Gebdykes Quarry, near Masham (XY: 423503 482933)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of Magnesian limestone as proposed extension to existing quarry
Size	25.8ha north of C133 lane and 1.3ha between existing quarry extraction area and C133 roadside landscape planting. Total: 27.1ha
Proposed life of site	15 years
Notes	Existing quarry site restoration is to agriculture and woodland. The proposed strip of land to the North of the existing quarry will retain the existing screening, the area proposed goes from the boundary of the existing extraction to the boundary of the existing screening. Landscaping will follow along the lines of the existing permission, with low level agricultural restoration.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and	<u>Proximity of international / national and local designations and key features</u> Special Area of Conservation (SAC)/Special Protected Area (SPA): 6km west- North Pennine Moors SPA/SAC; Site of Special Scientific Interest (SSSI): Site is 1.1km from Mar Field Fen SSSI; SSSI Impact Risk Zone (IRZ): Site is in SSSI IRZ which identifies quarry extensions as development that Natural England would wish / has been consulted on ² ; Site of Importance to Nature Conservation(SINC): Marfield		✓	✓		-	0	?

² Natural England notes the modifications to the allocation and has no further comments on site MJP11.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
improve habitat connectivity	<p>Gravel Pit SINC (c1.16km), Watlass Moor Lane Grassland (deleted SINC) (c1.16km).</p> <p>Priority habitats: Deciduous woodland 10m east of the site, 10m south-east and 20m south-west. No ancient woodland on site or adjacent. Green Infrastructure (GI) network: Site in regional GI Network 'Ure R16'. Although the site is not located within a Living Landscape, it lies circa 60m east of the River Ure Corridor NY10.</p> <p>Site visit noted arable farmland (wheat crops), hedgerows and standalone trees.</p> <p>Local Effects The main area of the site appears to be arable farmland with boundary trees and hedgerows. There is the potential for the site and surrounding area to support nesting birds, badger, foraging bat and brown hare. Impacts upon standalone trees are dependent on their age.</p> <p>Exposing limestone provides an opportunity to create priority calcareous grassland or scrub habitat and possible geological diversity interest, which would strengthen habitat corridors. So this could be encouraged through restoration.</p> <p>The site is a relatively small quarry. One problem that may arise is where quarry operators extract right next to the boundary, which may leave fewer habitats for cliff nesting birds (though good practice requires appropriate standoff). If restoration is limited in scope, biodiversity offsetting may be appropriate.</p>							+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There is a cumulative impact associated with disturbance to local habitats in relation to the existing Gebdykes quarry and also with the quarrying at Marfield. However, appropriate 'Nature after Minerals' type restoration proposals could provide a long term positive cumulative effect for the area.</p> <p>Plan level / regional / wider effects. Due to the distance and type of development, it is unlikely that there would be any significant effects on Natura 2000 sites. While SSSI IRZ identify Marfield Fen SSSI as a possible receptor to this site, dust would be unlikely to have a significant effect due to distance, while hydrological effects could only occur if there were a hydrological link. As this site is likely to be extracted above the water table (based on extraction at the current site³) impacts could only theoretically occur as a result of fuel spills migrating through the bedrock to the aquifer, which can be mitigated for through good site management. Specific reference to potential hydrological impacts on Marfield Fen SSSI can be made within development management measures to be considered in any future application where appropriate. However, should extraction require going below the water table, a hydrological survey will be required.</p>							
	<p>³ The screening letter for a recent proposal at Gebdykes Quarry confirmed that working stone at 115m AOD would not affect the groundwater level and that the site would remain above the water table. Site MJP10 is adjacent and upslope from this site (Cromwell Wood Estate Company Ltd, 2015. TOWN AND COUNTRY PLANNING (ENVIRONMENTAL IMPACT ASSESSMENT) (ENGLAND AND WALES) REGULATIONS 2011 Regulation 5(2) - REQUEST FOR A SCREENING OPINION: SURFACE DEVELOPMENT FOR THE EXTRACTION OF PERMIAN LIMESTONE AT GEBDYKES QUARRY, MASHAM. APPLICANT - LIGHTWATER QUARRIES [URL: https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=9875]]</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site is in a Nitrate Vulnerable Zone (NVZ) (Surface water and groundwater); Not in or adjacent to a Source Protection Zone; Site is in Humber RBMP in the 'Ings Goit from Source to Burneston Beck' waterbody catchment which has a good overall status and a target of good by 2015. Groundwater: in 'SUNO Magnesian Limestone': Current quantitative quality is good, chemical quality is good. Catchment Abstraction Management Strategy (CAMS): for most of site surface water resources are available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Because this site is in a NVZ, local water bodies may be vulnerable during the restoration phase of the project if soils or fertilizers are mismanaged. As with all minerals sites there is a risk of water pollution from fuel spills, however, such occurrences should be readily avoidable through good site management, though we have recorded a negligible effect to reflect this risk and uncertainty, as the onsite process unknown .</p> <p>As this site is likely to be extracted above the water table (see footnote 1), overall the effect is predicted to be neutral during the lifetime of the quarry, with impacts following restoration uncertain (as restoration is currently unknown). Most impact would be expected to be managed via an environmental permit.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		0	0	0
						?	?	?
3. To reduce	<p>Proximity of transport receptors Site is relatively close to the A1(M) giving reasonably good access to York, Leeds and Harrogate and Teesside; Access: Confirmed as being the existing Gebdykes</p>		✓		✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Quarry access onto B6268 approximately 250m south of Five Lane Ends junction with means of crossing from MJP11 into current Gebdykes Quarry to be confirmed, but may be a conveyor beneath the C133 lane, at a point somewhere between Five Lane Ends and Gebdykes Farm but still to be decided; HGV Vehicles: 64 two-way movements; Light Vehicles: 7 two-way movements.</p> <p>Net change in daily two-way trip generation: Light vehicles: 0; HGVs: +16. Traffic assessment rating: green.</p> <p>Public Right of Way (PRoW): No designated PRoW within site area and access to this site is not affected by a PRoW. Rail: 15.27km east; Strategic Road: A1(M) is 8.5km east (direct) Canal / Freight waterway: 14.2km south-east.</p> <p>Local effects This site is slightly more distant from the A1(M) than other sites, though there are relatively few receptors en-route to the A1(M) as access would utilise the existing Gebdykes Quarry access point onto the B6268 which leads to the B6267 and then onto the A1(M).</p> <p>As an extension traffic impacts are likely to largely be a continuation of existing impacts rather than a new impact (however that could just mean that receptors will have to endure impacts for longer).</p> <p>According to the Highways Assessment the HGV movement is acceptable onto Five Lane Ends, but if existing access is used minor works to improve them may be required⁴. A transport assessment and travel plan will be required (though sustainable transport is not likely to contribute to this site). While the Joint Plan traffic assessment has deemed this site unlikely to have significant effects, our broader assessment under this objective rates the impact as insignificant to minor negative, largely due to the increased distance to markets from this site. Some uncertainty is noted as the site may be affected by a Highway Authority improvement scheme and also because some further reduction of impact could occur through use of a conveyor to connect to the existing quarry.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	
⁴ Further details	can be found within the Development Management, Policy D03							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Not within a hazardous substances consent consultation zone. Not within 2km of an Air Quality Management Areas (AQMA). Applying the 1km buffer around a site for possible impacts advised by MPS2 shows that it is possible that a number of individual properties including Gebdykes Farm adjacent to site to south-west, Snape Lodge Farm 400m east, Watlass Moor House 540m north-east, High Burton 580m west, Gebdykes Farm 750m south are in range of dust.</p> <p>Local effects Properties to the east are relatively well screened from the site by intervening deciduous woodland, whilst those to the south may be exposed to small scale dust impacts (negligible to minor negative due to distance). Most at risk is the farm adjacent to the south west. There could also be possible dust impacts on adjacent priority woodland. In terms of traffic, the site could result in 71 vehicle movements a day (235,000 tonnes to be transported annually), which if it were to route through nearby settlements, could lead to minor dust / very minor air pollution impacts in combination with other quarries (though this will largely be an extension of existing impacts rather than a new impact, and dust at least is relatively controllable). Uncertain to minor negative.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	?	?	?
5. To use soil and land efficiently and	<p>Proximity of soil and land receptor Agricultural Land Classification (ALC): Grade 3; Greenfield site - no known risk factors in relation to contaminated land. Soilscape: freely draining lime-rich and loamy</p>		✓	✓		m -	m-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
safeguard or enhance their quality	<p>soils with low carbon but moderate fertility. Soil depth may only be moderate.</p> <p>Local Effects Up to 27.1ha of possible best and most versatile land could be lost during the operational lifetime of this site. However, if restoration is to be to agriculture, some of this farmland loss will not be permanent though low level restoration⁵ will be required which may not be suitable for arable use. Any proposal for restoration to agriculture should be tested for viability – e.g. relative to the depth of extraction, requirement for inert material 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.</p> <p>Development proposals will be required to demonstrate that all practicable steps will be taken to conserve and manage all on-site soil resources, including soils with environmental value, in a sustainable way.</p> <p>Plan level / regional / wider effects If this site contains best and most versatile land, ultimately there could be an effect on food security as land is taken out of production. On its own 27.1ha is not likely to be a significant effect, though at a plan level effects could also be cumulative.</p>					?	?	?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Deciduous woodland 10m east of the site, 25m south-east and 20m south-west. Trees and hedgerows noted at site boundaries / field boundaries during site visits; Carbon in vegetation: low (4.72 tC/ha) / Carbon in soils: low (46.83 tC/ha).</p>	✓		✓		-	-	-

⁵ Nitrogen, Phosphate and Potash application are recommended on an annual basis, hence, low Level restoration will not integrate well with surrounding land management.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects See wider effects below.</p> <p>Plan level / regional / wider effects There would be some loss of vegetation including potentially hedgerows and trees from the site (though a strip of existing screening will be retained), but the site is in an area considered to have low carbon in vegetation and soils, while dust impacts on nearby woodland may reduce its productivity. However, these impacts are small scale and likely to be insignificant. A minor impact would come from traffic from the site which would need to ship limestone off site at a rate of 64 two way HGVs per day (extension of impacts into the future rather than new traffic). The site is reasonably proximal to the strategic road network (A1(M) 8km east) although the site is midway between northern and southern markets. Minor negative impact on climate change anticipated during the operation of the site. In addition, an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken⁶.</p>							?
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity⁷ of a site Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects a very small area (<5%). No English Heritage Network (EHN) adjacent. Catchment Abstraction Management Strategy (CAMS): For most of site surface water resources available at least 50% of time. At low flows new extraction licenses may be</p>	✓	✓	✓		m -	m- -	- -

⁶ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

⁷ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>more restricted.</p> <p>ALC: Grade 3.</p> <p>Local Effects Flooding is not a particular risk to this site and the site is unlikely to impair the movement of species vulnerable to climate changes. In addition, climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Agriculture contributes to climate change through the release of greenhouse gases and can also contribute to climate change mitigation by reducing greenhouse gas emissions / sequestering carbon / providing ecosystem services, while maintaining food production. Hence, loss of high grade agricultural land will have a minor negative impact over the short and medium term.</p> <p>Plan level / regional / wider effects If this site contains best and most versatile land, ultimately there could be an effect on food security as land is taken out of production. On its own 27.1ha is not likely to be a significant effect, though at a plan level effects could also be cumulative.</p>					?	?	?
8. To minimise the use of resources and encourage their re-use and	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local Effects This site will contribute to the need for limestone. However, depending on whether it is extracted as crushed rock or whether some building stone is extracted it may to a degree offset recycled materials that could potentially replace them. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 255,000</p>	✓		✓		m -	m- -	m -

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
safeguarding	<p>tonnes of virgin minerals would be extracted each year which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							?
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local Effects</u> The site would not deal with waste and no details are provided of how waste would be managed on site.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> No Conservation Areas within 1km; Registered Parks and Gardens: None within 2km - nearest Thorp Perrow (Grade II, ID 1,001,075) 2.3km north-east; Registered Battlefields: none within 2km; World Heritage Sites: none within 2km; Scheduled Monuments: none within 2km; Listed Buildings: 1 listed building within 1km - Dovecote (Grade II, NHLE no. 1,151,189) 680m north-east.</p> <p>Designed Landscapes- Snape Park 1km east, Clifton Castle 1.1km north-west, The Hermitage 1.7km north, Bellfield Gardens Allotments 1.7km south-west.</p> <p>Historic Landscape Character (HLC) Broad type - Enclosed land / HLC Type - Unknown planned</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>enclosure.</p> <p>Undesignated archaeology in this area includes evidence from metal detected finds, which include material of Roman, medieval and post-medieval date. There are high-status Roman remains in the vicinity to the north-east and south-east at Snape and Well. The deserted medieval settlement of High Burton lies to the immediate west of the site. There is potential for evidence of earlier settlement and activity from the prehistoric period onwards to be present in the area, although current archaeological evidence for this is sparse as there has been limited archaeological fieldwork in this area to date.</p> <p>Local effects It is thought unlikely that this site would have a significant impact on designated historic environment sites. Further assessment of the potential impact on heritage assets should be carried out and issues raised by Historic England will need to be considered within the identification of the key sensitivities and identification of development management matters to be considered in any future application where appropriate.</p> <p>However, the HLC type of this area is unknown planned enclosure and as the allocation site amounts to about two thirds of the area characterised as such in this location, with significant legibility, it is felt that there will be a negative impact upon HLC of this type.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>However, there are other areas of unknown planned enclosure to the south west of the site, and so the proposed extraction is unlikely to have a major impact upon the HLC of the immediately surrounding area, although within the site the HLC will become invisible as development will replace an earlier field system, so it is felt that the impact will be a minor negative.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p><u>Proximity of landscape / townscape receptors and summary of character</u> National Parks / Areas of Outstanding Natural Beauty (AONB): None within 5km - Yorkshire Dales National Park 8km west, Nidderdale AONB 2.7km west; Heritage Coast: None within 5km; ITE land: None within 5km; District level landscape designations: No.</p> <p>National Character Area (NCA): Southern Magnesian Limestone; NYLCA: Landscape Character Type: 'Magnesian Limestone Ridge' (moderate to high visual sensitivity, high ecological sensitivity and high landscape and cultural sensitivity), Local LCA: - Site within area 41 (River Ure Corridor-Charlcot to Aldburgh Hall) of the Harrogate LCA.</p> <p>Tranquillity: Relatively tranquil, though southern part of site is in an area classed as disturbed; Urban intrusion – undisturbed rural area, apart from existing quarry; Light pollution – low (score of 55 on CPRE (2000) scale of 1-255, where 1 represents maximum darkness.</p> <p><u>Local Effects</u> The assessment below has been revised to take into account an additional 1.3 ha area between the application site and the existing quarry, adjacent to the lane leading from Five Lane Ends to Gebdykes Farm. The intention is to divert the existing overhead power line so that this area can be quarried. The reduction in width of the corridor of planting, hedgerows and original contours along the minor road to Gebdykes Farm is likely to have a detrimental landscape impact. Quarrying is likely to remove most of the belt of screen planting associated with the current quarry which would also have helped to mitigate the effects of the proposed quarry to the north of the lane. The additional effects may not be major negative, so the scoring has not been revised, but the visual impacts of quarrying are likely to be increased, with less scope for mitigation.</p> <p>There are no effects on any designated landscapes and the site is not close to any settlements, so there is no impact on their setting.</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The site would be a continuation of the existing Gebdykes Quarry, on the other side of a minor road, and there would be cumulative effects on the flattened ridge on which it is situated (not a good location for a quarry given the potential for quarrying to be visible on the skyline (e.g. from river corridor). However the site is not inter-visible with other quarries. Indeed, the site could potentially increase visual intrusion as it is located on a ridge (albeit a relatively flattened ridge which has shelterbelts and woodland blocks which break up views. A square hole with cliffs would not be desirable. The restoration profile needs to give scope for softening the edges, e.g. through formation of benches & screes, rounded corners, etc. This scope could be limited if the area of extraction of the existing quarry was extended further to the north.</p> <p>The site is partly screened by screening associated with the existing quarry, and there is an existing shelterbelt to the east. However the site will still be visible from the minor roads on two sides affecting some road users approaching Masham.</p> <p>There is also a landform issue as cannot develop a comprehensive scheme for the whole area including the existing quarry (as the landform would be divided by the retention of the road between Five Lane Ends & Gebdykes Farm). This situation would remain, but the road to Gebdykes Farm would be left on a narrow ridge above the quarry voids.</p> <p>There may be cumulative impacts with the quarry to the south. When effects are combined Lime Kiln Lane may be visually impacted. There may also be a loss of field pattern and hedgerows. There could also be impacts on the setting of Gebdykes Farm (early 19th Century development / an undesignated heritage asset), particularly if any buildings are proposed. There may also be visual effects on a right of way to the west. Strips of woodland buffers might be desirable – probably on the top of the quarry to lessen effects.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects None noted.							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Site is relatively close to the A1(M) giving reasonably good access to York, Leeds and Harrogate and Teesside (though its central location does not align it with one specific market area).</p> <p>Local Effects This site would ultimately result in 3.8 million tonnes of limestone being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight. However, the success of the operation is based on both Potgate (MJP10) and MJP11 (Gebdykes) quarries working together and being able to supply the concrete batching facility on site.</p> <p>Plan level / regional / wider effects Some limestone could potentially be exported beyond the Plan area.</p>		✓	✓	✓	m+	m+	m+
								?
13. Maintain and enhance the viability and vitality of local	<p>Proximity of factors relevant to community vitality / viability Index of Multiple Deprivation (IMD): Mashamshire - Not in most deprived 20%. No villages lie within 1km- the nearest settlement is Masham 1.6km south-west.</p> <p>Local Effects Job opportunities arising from this site are likely to be limited, and while the site would</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
communities	<p>provide a source of limestone which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. The site is unlikely to either hinder or boost local tourism. Overall any effect is considered to be insignificant.</p> <p>Plan level / regional / wider effects None noted.</p>							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Footpath 10.133/10/1 begins circa 30m south-west of the site. No village greens or common land within 500m.</p> <p>Local Effects A short stretch of footpath that is likely to be of local use begins circa 30m south of the site and it is considered that users of this path may experience visual, noise and dust impacts as a result of the allocation. The road to the south may be used by walkers – so they would need to be accommodated. Green Lane, which is assumed to be an unclassified road, may also be used by walkers. Impacts are considered to be minor negative during the operation of the site.</p> <p>Plan level / regional / wider effects As the site is in the Ure Regional Green Infrastructure Corridor access to the restored site should be considered.</p>		✓	✓		-	-	0
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No villages within 1km (Masham is 1.6km south-west). Individual properties nearby: Gebdykes Farm adjacent to site to south-west, Snape Lodge Farm 400m east, Watlass Moor House 540m north-east, High Burton 580m west, Gebdykes Farm 750m south. No schools within 1km. No hospitals, health centres or clinics within 1km.</p> <p>Local Effects Without mitigation it is possible that noise and dust could affect nearby properties, particularly Gebdykes Farm, so full assessment of these impacts will be needed. Traffic may also add</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>to dust, noise and air pollution at a low level, cumulatively with other quarries and local traffic.</p> <p>Plan level / regional / wider effects None noted.</p>							
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is in Flood Zone 1. Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects a very small area (<5%). However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>This site is in an area that is not mapped in terms of its susceptibility to groundwater flooding, and hence there is uncertainty about post operational groundwater flood impacts. No reference to groundwater is made in the committee report for the adjacent site⁸.</p> <p>This site is not at risk from the 1:20 (5%) flood event⁹.</p> <p>Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Sequential Test result – Pass.</p> <p>Local Effects Flooding is not a significant issue. As with all sites above 1ha, a site specific flood risk</p>					0	0	0

⁸ North Yorkshire County Council Environmental Services Committee, 1996. North Yorkshire Minerals Local Plan, Gebdykes Quarry, near Masham [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=1591>]

⁹ In the North West Yorkshire SFRA functional floodplain is defined as undeveloped areas in Flood Zone 3, maps were not available for review at the time of writing. The North West Yorkshire SFRA is in the process of being revised therefore we consider the 1:20 (5%) extent in this location should be considered 'initial' functional floodplain

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>assessment would need to further examine risk of groundwater flooding, any future climate change risk, and how SuDS could help manage run off.</p> <p>Plan level / regional / wider effects None noted.</p>							
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local Effects The site would make a significant contribution to self-sufficiency in the supply of Magnesian limestone and may also support markets outside of the Plan area. However, the success of the operation is based on both Potgate (MJP10) and MJP11 (Gebdykes) quarries working together and being able to supply the concrete batching facility on site.</p> <p>Plan level / regional / wider effects The site may support markets outside of the Plan area.</p>		✓	✓		+	+	+
Cumulative / Synergistic effects¹⁰								
Planning context	The nearest settlement is Masham 1.6km south-west. Not in the Harrogate Settlement Hierarchy.							

¹⁰ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Other Minerals and Waste Joint Plan Sites	MJP16 is 1.8km west.
Historic minerals and waste sites	An active quarry (Marfield Quarry) lies 1.5km west. The site is an extension to Gebdykes Quarry immediately adjacent to the south.
Landscape Impacts	The site would be a continuation of the existing Gebdykes Quarry, on the other side of a minor road, and there would be cumulative effects on the flattened ridge on which it is situated (not a good location for a quarry given the potential for quarrying to be visible on the skyline (e.g. from river corridor). However the site is not inter-visible with other quarries. The proposed addition areas of extraction is likely to increase the cumulative visual impacts of the quarries to north and south of the minor road between Five Lane Ends and Gebdykes Farm.
Biodiversity Impacts	There is a possible cumulative biodiversity impact associated with disturbance in relation to the existing Gebdykes Quarry and also with the quarrying at Marfield. However, appropriate restoration proposals that include measures for biodiversity could provide a long term positive cumulative effect for the area.
Traffic	Traffic may also add to dust, noise and air pollution at a low level, cumulatively with other quarries and local traffic.

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on protected species and mitigation of the potential hydrological impacts on Mar Field Fen SSSI
- Design to mitigate impact on best and most versatile agricultural land and to protect high quality soil resources
- Design to include landscaping to mitigate impact on heritage assets (Listed Buildings- Low Mains Farmhouse, Low Burton Hall & a dovecote and archaeological remains, Masham Conservation Areas, Registered Historic Park and Garden) and their settings, and local landscape features

- Design to include site specific flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate
- Design to include landscaping to mitigate impact on users of local roads and rights of way and on the heritage assets in the vicinity (Listed Buildings) and their settings
- Design to include appropriate arrangements for crossing road between existing quarry & MJP11 site and improvements to existing quarry access
- Design to undertake an assessment / proposal has taken into account the need for resilience to climate change factors
- Appropriate arrangements for control of and mitigation of the effects of noise and dust on local residence.
- Appropriate restoration scheme (using opportunities for habitat creation, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland e.g. birdstrike safeguarding zone / referred to Defence Infrastructure Organisation (DIO)), noting that any proposal for restoration to agriculture should be tested for viability – e.g. relative to the depth of extraction and requirement for inert material.

**Appendix 3d: Assessment of Sites in Hambleton and Richmondshire District
(Split)**

Minerals and Waste Joint Plan

Contents

ALLOCATED SITES			
Reference	Site Name	Type of site	Page
MJP21	Land at Killerby	Extraction of sand and gravel	4
MJP17	Land to South of Catterick	Extraction of sand and gravel	29

EXCLUDED/ DISCOUNTED SITES			
Reference	Site Name	Type of site	Page
MJP17	Land to South of Catterick (excluded area)	Extraction of sand and gravel	46

Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

MJP21 – Land at Killerby

Site Name	MJP21 Land at Killerby, Richmondshire and Hambleton (XY 426259 495822)
Current Use	Agriculture and woodland
Nature of Planning Proposal	Extraction of sand and gravel from a new extraction site
Size	213ha, of which 122ha proposed for extraction
Proposed life of site	16 years. Extraction would occur for an initial period of 2 years, after which the remaining permitted reserves at Ellerton Quarry would be extracted (5 to 6 years), then the remainder of the Killerby reserves would be extracted during a period of 14 years. Estimate date of commencement – anticipated to be 2020 to 21, as submitter is promoting MJP21 as a replacement for the existing Scorton and Ellerton quarry sites
Notes	Proposed new quarry and subject to a current application (NY/2010/0356/ENV) that is awaiting determination. Possible restoration: agriculture, marshland, lakes, woodland (details submitted in connection with planning application NY/2010/0356/ENV include latest version of restoration scheme)

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and	<u>Proximity of international / national and local designations and key features</u> Natura 2000: 14km west - North Pennine Moors Special Protection Area (SPA) / Special Areas of Conservation (SAC); Site of Special Scientific Interest (SSSI): 1.7km from nearest SSSI (Swale Lakes); Site of Importance for Nature Conservation (SINC): lies partly within northern boundary of site (SE29-04 River Swale, Great Langston to	✓	✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
improve habitat connectivity	<p>Kiplin). Park Plantation SINC is 1.2km. Great Langton Pond 1.6km. Kirkby Wood 1.3km.</p> <p>UK Priority Habitats: Deciduous woodland overlaps site in several places, particularly in the north. Smaller patches adjacent to or overlapping the perimeter of the southern part of the site. Site around 200m from traditional orchard in south-east. Ancient woodland: A strip of ancient woodland lies approx. 170m east of the site at the closest point.</p> <p>Ecological Networks: approximately 8% of the site (northern area) covered by England Habitat Network (woodland). An additional area lies adjacent to the site to the east; circa 60% of the site lies within the Swale regional Green Infrastructure (GI) corridor; circa 20% of the site lies within NY08 Swale Washlands Living Landscape. Key habitats: River Swale, wetlands. Management issues- Aggregate extraction site restoration.</p> <p>The site supports a mosaic of arable farmland, pastoral grasslands, mature hedgerow, mixed plantation, scattered mature trees, wet woodland, small watercourses, wet grassland and tall ruderal habitats. Surveys to support the current planning application (NY/2010/0356/ENV) at the site have identified bats, nesting birds, brown hare, badger, otter and water vole.</p> <p>In terms of invasive species, both Japanese knotweed <i>Fallopia japonica</i> and Himalayan balsam <i>Impatiens glandulifera</i> are present within the site. The survey work for the current application shows that the extent of both species has increased between the initial 2009 survey and the 2014 update surveys. The proposed development has the potential to increase the spread of these species.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects No significant effect expected on Natura 2000 sites. It is considered that there may be some minor temporary disturbance to the nearby SSSI however the surrounding area has a history of quarrying so disturbance from noise etc. is not expected to be significant. There are potential direct and indirect adverse impacts upon SE29-04 River Swale, Great Langston to Kiplin SINC which lies partly within and adjacent to the site (biodiversity may be affected by the two proposed river crossing points). Up to date ecological surveys will be required in order to identify key features of ecological importance. The SINC boundary for riverine SINC includes the river corridor for completeness but it does not necessarily mean that all habitats within the boundary are of SINC quality. The quarry could then be designed to avoid features of interest, provide mitigation for habitats and species that are affected and ultimately strengthen the SINC through high quality restoration. These impacts and possible mitigation are currently being looked at in the current planning application.</p> <p>This area represents further quarrying in the Swale corridor in addition to existing and past quarries at Ellerton, Kiplin Hall and Scorton. Negative cumulative impacts are considered unlikely to be significant if appropriate mitigation is implemented. Potential cumulative benefits for biodiversity exist provided that restoration schemes are designed appropriately and any measures for biodiversity can be secured as part of the planning process. It is however noted that not all of the site is within the control of the operator so there is some uncertainty as to whether ecological benefits can be realised as part of the restoration scheme (biodiversity restoration is limited to a lake with no surrounding land and Ministry of Defence restrictions also limit the type of scheme that could be put in place).</p> <p>In summary, in the short term negative impacts are anticipated associated with the loss of habitats and disturbance to a range of species. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and management. Opportunities exist to improve the habitat networks through the creation of high quality priority habitats.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant impact on the integrity of Natura 2000 sites.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors The site is not in a Nitrate Vulnerable Zone. The site does not lie in a groundwater SPZ however SPZ 3 lies circa 40m east of the site. In the Humber River Basin Management Plan (RBMP) SUNO catchment. The nearest RBMP water body is Swale from Muker Beck to Bedale Beck which passes through the northern area of the site. Current ecological status is moderate, with overall potential moderate. Objective is good by 2027. No RBMP lakes. RBMP Groundwater: Site falls between SUNO Millstone Grit and Carboniferous Limestone (quantitative quality good / chemical quality poor) and the SUNO Sherwood Sandstone (quantitative quality good, chemical quality poor - current overall status poor / good by 2027) and the SUNO Magnesian Limestone (quantitative quality good / chemical quality good - overall status: good / objective: good by 2015) groundwater bodies.</p> <p>Catchment Abstraction Management Strategy (CAMS) surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The Swale could be a receptor for pollutants (such as fuel or soil / silt particles) during flood events though this is a large watercourse so, given the sorts of pollutants that could be generated and the ability of the river to flush and dilute, risk is seen as relatively minor and mitigatable by good site management and plant maintenance. The Planning Application and Environmental Statement² states that dewatering would be undertaken at the site to allow dry working of the mineral. It concludes that following mitigation, such as the pumping of dewatering discharge water to onsite lagoons where settlement will occur prior to discharge and the regulated discharge of water from the settlement lagoon to compensate for reduction in the groundwater base flow; dewatering would not result in significant adverse impacts and long-term alterations to groundwater flow would not be anticipated following restoration. Impacts are considered to be minor negative in the short and medium term (although it is considered that successful implementation of mitigation and application of good practice measures could offset this). In the long term it is considered</p>		✓	✓	✓	-	-	?

² Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 9- Water Resources: Hafren Water.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>that opportunities exist for the improvement of water quality for example through the creation of habitats such as reed bed. Impacts in relation to restoration are however uncertain until a specific restoration plan is agreed.</p> <p>Plan level / regional / wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by good site management and plant maintenance.</p>							
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside. Access: Confirmed as being the access as per latest details for application NY/2010/0356/ENV, i.e. at bend at north end of Low Street west on Low Street onto the new local access road which will run adjacent to the upgraded A1(M) once constructed.</p> <p>Light Vehicles: 42 two-way movements (as sourced from application details NY/2010/0356/ENV); Heavy Goods Vehicles (HGVs): 336 two-way movements (as sourced from application details NY/2010/0356/ENV);</p> <p>Net change in daily two-way trip generations: Light vehicles 28; HGV: 86. Traffic assessment rating: Yellow – ‘Submission MJP21 would be a new site but would replace workings at the nearby Scorton and Ellerton quarry sites. The site would be accessed by an upgraded section of Low Lane and the Local Access Road which is presently being constructed as part of the A1 Leeming to Barton improvements. The local access road and junctions onto the A1(M) have been designed taking into account Local Plan development sites such as submission MJP21 and avoid any sensitive receptors and are thus expected to result in no significant traffic impacts. It is however recommended that a routing agreement is put in place to prevent HGV traffic to Teesside passing along the A684 through Northallerton.’³</p>		✓	✓		m-	m-	0

³ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>PRoW: This site is affected by a registered PRoW which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: Nearest national rail network 7.7km east; Strategic Road: A1(M) lies adjacent to the site; Canal / Freight waterway: Tees Navigation 17km north-east.</p> <p>Local effects HGV movement would be acceptable on to Low Street however works will be required to improve this road to access the local access road (the scope of these works would need to be determined in the traffic assessment / travel plan).</p> <p>As the majority of trips generated by this site would replace trips from the existing Scorton and Ellerton Quarry sites most journeys can be thought of as a continuation of existing impacts (though these impacts will endure for longer than if there were no plan in place).</p> <p>Traffic modelling carried out through the Joint Plan traffic assessment estimates that 75% of demand from this area comes from Teesside and Durham. The route towards Teesside takes a similar amount of time whether by the A1(M) and A66 or the A684 through Northallerton and then the A19. Without any mitigation the site would generate a high number of traffic movements per day through a significant settlement (and sustainable transport is not likely to contribute to access to the site). A moderate negative impact is therefore anticipated in relation to this objective. However, the traffic assessment does suggest mitigation in the form of a routing agreement to route vehicles via a Local Access Road to the A1(M) or the A684, which would reduce effects in relation to impacts to receptors in Northallerton.</p> <p>Plan level / regional / wider effects Allocated sites MJP17, MJP21 and MJP33 and discounted site MJP43 are situated in the area between Catterick to Leeming Bar, all of which have been given a yellow rating within the Traffic Assessment. All four sites are around the area where the A1(M) Leeming Bar to Barton upgrade is taking place. The cumulative traffic impact of the submission sites would utilise the A1(M) and</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Local Access Roads which are currently under construction and have been designed to provide future highway capacity for these sites. On completion of the A1(M), the cumulative traffic impact of the allocated sites is therefore not expected to be significant.							
4. To protect and improve air quality	<p><u>Proximity of air quality receptors</u> Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA.</p> <p><u>Local effects</u> The current planning application has assessed all residential properties within 500m of the site for dust impacts. It concludes that following the implementation of mitigation measures which will include damping of haul roads, wheel washing, sheeting of vehicles, vehicle speed restrictions etc., there would be insignificant dust impacts on nearby properties⁴. Restoration could ultimately improve air quality by habitats absorbing pollutants such as from the A1(M), though this is not expected to be at a significant level. Air quality impacts from vehicle emissions are not considered as part of the existing planning application however, without mitigation the site could generate significant amounts of traffic which could route through Northallerton (and pass other settlements en route), which could have moderate effects on air quality in the short and medium term.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓	✓	✓	✓	m-	m-	0

⁴ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 10- Air Quality: Wardell Armstrong.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification: land at the site is classed as Grade 2 (very good quality), Grade 3 (good to moderate quality) and Grade 4 (poor quality). Greenfield site - no known risk factors for contaminated land. No known mining subsidence risks.</p> <p>Local effects The Environmental Statement⁵ for the existing Planning Application reports that the proposal would result in the temporary disturbance of approximately 88.9ha of Grade 2 and 3a agricultural land and 48ha of Grade 3b agricultural land as a consequence of soil handling prior to site operations. However, the restoration masterplan identifies 64.5ha of agricultural land within the areas of extraction, resulting in an overall loss of 57.4ha of agricultural land, of which 29.5ha is best and most versatile.</p> <p>Plan level / regional / wider effects The loss of best and most versatile agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered to be a small in relation to the overall agricultural land lost in England per annum to development⁶ but could have a small scale effect on national food production capacity.</p>	✓	✓	✓		m-	m-	-
								?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Small patches of deciduous woodland lie onsite and areas lie adjacent to / overlapping the site boundary. Site visit noted the following features on site: grassland / pasture, woodland / copse, hedgerows, standalone trees.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of</p>	✓			✓	-	-	-

⁵ Wardell Armstrong,2010. Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 8- Soils and Agriculture.

⁶ 29.5ha annualised across the 16 year life of the site would be an annual 1.8ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 1.8ha loss would represent a 0.08% contribution to this category of soil loss across England for each year of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and would therefore lead to significant climate change impacts, albeit lessened by this site's proximity to the A1(M) and northern markets in particular. Restoration is likely to have some potential as a carbon sink. Overall during the operational phase of the proposed site is expected to have minor negative effects on the SA Objective. An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken ⁷ .							?
7. To respond and adapt to the effects of climate	Proximity of factors relevant to the adaptive capacity⁸ of a site About 35% of this site is in Flood Zones 2 and 3. Flood defences are also evident in the north-east corner, though the area is not shown as an area benefiting from flood defences and the standard of protection is not clear. More detailed modelling is available through the 2010 Flood Risk Assessment for this site that showed that some protection is afforded	✓		✓	✓	-	-	-

⁷ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

⁸ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>by flood defences⁹.</p> <p>Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 5% of the site. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses). Ouse CFMP / Unit: Swale Washlands / Policy 6. Circa 20% of site is in the Swale Washlands Living Landscape.</p> <p>ALC: circa 30% of site is Grade 2, 65% is Grade 3 and 5% is Grade 4.</p> <p>Local effects Although the site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site offer flood storage to the wider catchment. The element of standoff from the river corridor at this site means it is not likely to hinder species movements / form a barrier to the formation of an ecological network. As this site would be active beyond 2025, river flooding may increase in significance beyond 2025. This would increase the area of Flood Zone 3 into areas that are shown as Flood Zone 2 and would also increase the extent of Flood Zone 2. Climate change effects on surface water flooding noted in a Strategic Flood Risk Assessment are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Overall, the effects on this SA objective are likely to be minor negative although there is some uncertainty as to any long term effects post restoration of the site.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate</p>							?

⁹ Hafren Water, 2010. Flood Risk Assessment for Killerby Quarry, Catterick [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=7585>]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	change – the effect is considered a minor negative.							
8. To minimise the use of resources and	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified.</p> <p><u>Local effects</u> This site will contribute to the need for sand and gravel. However, it may to a degree offset</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
encourage their re-use and safeguarding	<p>recycled materials that could potentially replace sand and gravel. This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p>Plan level / regional / wider effects Considered to be the same as local effects.</p>							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste down the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and	<p>Proximity of historic environment receptors Conservation Areas: Kirkby Fleetham 1km south-east; Registered Parks and Gardens: 3.4km south-west – Hornby Castle Park (ID 1001075); Registered Battlefields: None within 5km; World Heritage Sites: None within 5km.</p> <p>Scheduled Monuments: 120m north-west – World War 2 fighter pens and defences at former RAF Catterick (ID 1020990); 840m north-west – Bainesse Roman roadside settlement and Anglian cemetery (ID 1021209); 490m north – Castle Hills medieval motte and bailey castle and 20th century airfield defences (ID 1020991); 1.3km south-east – Motte and bailey castle and medieval settlement earthworks within Hall Garth (ID</p>	✓		✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
character	<p>1021103).</p> <p>Listed buildings: 20 listed buildings within 1km (1 Grade I, 2 Grade II* and 17 Grade II). Closest is Stable Block to Killerby Hall (60m south, Grade II - NHLE No. 1295757) which is surrounded by site on 3 sides. Other listed buildings include those associated with Oran House (approximately 530m north) and those associated with Kiplin Hall (approximately 800m north-east).</p> <p>Site visit confirmed the site forms an important part of the agricultural landscape context of the overall farm / hall complex (Stable Block to Killerby Hall), which is the primary setting of the building. Other heritage assets listed above are screened by topography and vegetation, so are not visible. No other contribution to asset significance was observed,</p> <p>Designed landscapes: Site overlaps with Killerby Hall, Oran House lies adjacent to the site to the north, Kiplin Hall (unidentified parkland) 140m north-east, Kirkby Hall 300m east, Hornby Park (unidentified parkland- designer Lancelot 'Capability' Brown) 1.7km south-west.</p> <p>HLC Broad type - Enclosed land; HLC Type – Modern improved fields and piecemeal enclosure; Undesignated archaeology in this area includes evidence for early prehistoric human activity including being a focus of early hunter-gatherer activity. There is also evidence of Roman, medieval and post-medieval activity across the allocation site.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects An assessment of potential impacts to the historic environment, including site visit, reported that the allocation would have a minor negative effect on the significance of the Grade II Listed Building “Stable Block to Killerby Hall” 60m south of the site, during the operation of the site. The removal of a significant amount of landscape context for an industrial landscape may detract from the designation significance. This may be reduced to negligible effect over time with appropriate landscaping. The assessment found there would no effect on the significance of any other built heritage assets within the vicinity of the site.</p> <p>The site allocation has two HLC types, ‘modern improved fields’ and ‘piecemeal enclosure’. The second HLC type is significant, of which the legibility is significant. The majority of this area would be lost through mineral extraction. It is acknowledged that within the site the HLC will become invisible as development will replace an earlier field system. The proposed extraction is unlikely to have a major impact upon the HLC of the immediately surrounding area as 17% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the early prehistoric period onwards. The site has been subject to an archaeological field evaluation, and allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. It is assumed that the archaeological impact will occur throughout the duration of extraction and will result in the total destruction of the undesignated archaeological remains. As archaeology is a finite, irreplaceable resource, the impact would therefore be significant. However, it is assumed that investigation works required by the Joint Plan Policy D08 (Historic Environment) ‘<i>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 before or during development.</i>’ Would reduce this to a minor negative effect.</p> <p>Plan level / regional / wider effects. None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; AONBs: none within 10km; Heritage Coast: None within 10km; ITE land: None within 5km; Local Landscape Designation: None.</p> <p>NCA: The site lies within the Vale of Mowbray; NY&Y LCA: The site is partly within Landscape Character Type 24: River Floodplain (northern 50% of site) and partly within LCT 25 Settled Vale Farmland (southern 50% of site); Hambleton LCA: Most of site is in Hambleton and lies in a landscape character type called 'intensively farmed lowland (simple topography) - Intermediate enclosure 5b'.</p> <p>Intrusion: Around 25% of the site is classed as undisturbed and the remaining 75% is classed as disturbed. Light pollution: the site ranges from 0.5 to 1NanoWatts/ cm²/ sr¹⁰.</p> <p>The site is largely screened by topography, and by vegetation and flood banks along the River Swale. Areas to the west are locally visible from the A1(M) and rising ground to the west of the A1(M).</p> <p>Local effects No impacts on nationally or locally designated landscapes. Marne Barracks at Catterick, and the village of Kirkby Fleetham are within around 1km of the site, however their settings are considered unlikely to be adversely affected.</p> <p>This extensive site would be the first, in a potentially large cluster including the existing Scorton, Ellerton and Kiplin Hall Quarries, to be located to the south of the River Swale. The site would affect two locally designed landscapes at Killerby Hall and Oran House. It would affect an area of small scale topographical variation resulting from glacial and fluvial processes.</p>	✓	✓	✓	✓	m-	m-	-

¹⁰ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>In terms of visual intrusion, the site is largely screened, however part of site will be visible from the A1(M), and from higher land to the west of the A1(M). The site lies within the A1(M) corridor and within the Leeming Airfield and Catterick 'military zone', however the immediate locality between Killerby Hall and the nearby Kirkby Fleetham Hall is private and relatively undisturbed.</p> <p>Overall, it is considered that moderate negative impacts would occur in the short and medium term as there would be a significant local change in character, with the establishment of the processing plant site to the south of the River Swale, temporary bridges connecting the site with Ellerton Quarry, and phased sand and gravel extraction. In the long term, a minor negative impact is anticipated as the natural character of the landscape would be irreversibly changed (the restoration scheme would result in the creation of a water body between Oran House and Killerby Hall which is considered would look out of place), although the Killerby Hall parkland and some of its surrounding ridges would remain.</p> <p>Plan level / regional / wider effects None noted.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The site is adjacent to the A1(M) giving reasonably good access to York, Leeds and Teesside.</p> <p>Local effects The estimated mineral reserve at the site is 11,370,000 tonnes of sand and gravel, with this potentially being made available to the market over the lifetime of the site. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight jobs). However, the extraction of minerals is not considered a long term industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short term and medium term (the 16 years the site would be operational), with a neutral effect in the long term following closure of the site.</p>	✓	✓	✓	✓	+	+	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<u>Plan level / regional / wider effects</u> None noted.							
13. Maintain and enhance the viability and vitality of local communities	<u>Proximity of factors relevant to community vitality / viability</u> IMD Area: Leeming Bar, Brompton-on-Swale and Scorton. Not in the most deprived 20%. Kirkby Fleetham is the nearest settlement 900m south-east. Ellerton-on-Swale lies 900m north, Kiplin lies 900m east and Catterick lies 1.2km north-west.	✓	✓		✓	+	+	+
	<u>Local effects</u> The site would support a number of jobs leading to minor positive impacts in the short and medium term. Whilst the site would provide a source of sand and gravel which could aid future development, it is considered that the immediate settlements are unlikely to directly benefit. In the long term it is considered that the restoration scheme has the potential to boost tourism in the area through the creation of new bridleways / rights of way (8.8km of new routes are included in current planning application) and through the recreational use of the restored site area.							?
	<u>Plan level / regional / wider effects</u> Not applicable to this site.							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Footpath 10.78/1/1 runs through the middle of the site to Killerby Hall. Footpath 10.84/14/1 runs along the southern boundary of the site and joins 10.78/1/1. Footpath 10.84/15/2 also meets 10.78/1/1 at the southern site boundary. Bridleway 20.2/11/1 begins approximately 50m from the site boundary on the other side of the A1(M). No common land or village greens within 500m.</p> <p>Local effects Footpath 10.78/1/1 would be diverted. Users of this right of way would experience a direct impact as a result of the diversion. Visual amenity and noise impacts would also be anticipated, however the location of the site adjacent to the A1(M) means that background noise levels are already elevated. Dust has the potential to impact upon users of nearby rights of way however a number of mitigation measures (as set out under SA objective 4) are expected to be implemented. Overall, impacts are considered to be a moderate negative in the short term as a result of the diversion of a right of way, minor negative during the operation of the site and minor positive in the long term, due to the potential increase in recreational land and public access¹¹.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		m-	-	+
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Nearest settlements: Kirkby Fleetham lies 900m south-east, Ellerton-on-Swale lies 900m north, Kiplin lies 900m east, Catterick lies 1.2km north-west. No Hospitals, clinics or health centres within 1km. Several individual properties including Killerby Hall 30m from boundary, Killerby Farm partly within site boundary, Oran House 250m north, Kiplin Hall 700m north-east, property at Hookcar Hill 200m east, Hook House Farm 120m south, and Glebe Farm, Glebe Cottage and Killerby Cottages adjacent to the site.</p>		✓	✓	✓	-	-	0

¹¹ Killerby Sand and Gravel Quarry, Planning Application and Environmental Statement, Chapter 14- Access and Recreation: Wardell Armstrong.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects A noise survey has been carried out as part of the existing planning application. The survey found that noise levels are acceptable (traffic noise from the A1(M) means that noise levels in the area are already elevated). Noise control measures would also be put in place including the use of soil storage mounds as acoustic barriers, stand-off distances between receptors and plant. There would also be noise monitoring. Following the implementation of dust control measures, dust impacts are considered to be insignificant. The site is relatively well screened however some visual amenity impacts are anticipated and an increase in traffic to the site may lead to a negative impact in terms of health and safety of other road users and (if traffic from the site head east, exposure of a number of population receptors (including parts of Northallerton) to slightly increases air pollution. Overall impacts are considered to be minor negative before mitigation during the operation of the site. As the site restoration would involve the creation of water bodies, nearby airfields (Catterick Airfield, Croft Airfield and Leeming MOD) would need to be consulted due to the increased risk of bird strike.</p> <p>Plan level / regional / wider effects None noted.</p>							
16. To minimise flood risk and	<p>Proximity to flood zones About 35% of this site is in Flood Zones 2 and 3. Flood defences are also evident in the north-east corner, though the area is not shown as an area benefiting from flood defences and the standard of protection is not clear. More detailed modelling is available through the 2010 Flood Risk</p>	✓		✓		-	-	+

Sustainability Objective						Score		
		P	T	D	I	S	M	L
reduce the impact of flooding	<p>Assessment for this site that showed that some protection is afforded by flood defences¹².</p> <p>Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 5% of the site. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. In terms of groundwater flooding site lies across six 1km squares on the 'Areas Susceptible to Groundwater Flooding Map' all of which are areas that support superficial deposits flooding (at varying rates from <25% of a km square to >50% to <75% of a km square), apart from the south west corner which supports Clearwater and superficial deposits flooding (across <25% of the km square).</p> <p>A planning application at this site was accompanied by a Flood Risk Assessment that reported that "groundwater levels across all 3 areas are in the range of 37 to 43m AOD and range 1m to 9m below ground level" with Killerby East being at high risk of groundwater flooding due to good hydraulic connectivity with the river and Killerby West and South being at low to moderate risk..</p> <p>Much of the area in Flood Zone 3 is also considered to be at a 1:20 (5%) flood risk. However, the presence of a flood defence would mean that although the area could still flood in a 1:20 (5%) event, more frequent events may benefit from the flood defences, so the area behind the defence would not be functional. This has been investigated through a Flood Risk Assessment at the site which states that they are in the form of an earth bank 1 to 2m high which reduces the risk of fluvial flooding. This assessment also refers to a steep bank above the mean stage level for the River Swale which helps protect Killerby West.</p> <p>Site is in Ouse CFMP / Unit: Swale Washlands / Policy 6.</p>							?
¹² Hafren Water	2010. Flood Risk Assessment for Killerby Quarry, Catterick [URL: https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=7585]							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test undertaken for the site concluded that this site would 'Pass'. A flood risk assessment has already been carried out for this site. Although the site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site to offer flood storage to the wider catchment, although there is some uncertainty over the capacity of storage that would be provided as the quarry void may simply fill with groundwater following dewatering.</p> <p>Plan level / regional / wider effects None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population</u> The site does not conflict with any known allocations in other plans.</p> <p><u>Local effects</u> The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and provide a number of new jobs.</p> <p><u>Plan level / regional / wider effects</u> The site may also support markets outside of the Plan area.</p>		✓	✓		+	+	0
Cumulative / Synergistic effects¹³								
Planning context	Kirkby Fleetham (Hambleton) is the nearest Settlement 900m south-east. Ellerton-on-Swale lies 900m north (Richmondshire), Kiplin (Hambleton) lies 900m east and Catterick lies 1.2km north-west in Richmondshire. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Site allocations not yet finalised in Richmondshire. In Hambleton, no allocations lie within 200m of this site.							
Other Minerals and Waste Joint Plan Sites	MWJP sites within 5km: MJP33 Home Farm is adjacent to the east of the site, MJP17 Land South of Catterick is 300m west, MJP43 Land west of Scruton is 3.2km south and WJP18 Tancred is 3.5km north.							
Historic minerals and waste sites	The site lies within an area that has undergone extensive quarrying including at the Ellerton, Kiplin Hall, Scorton and Manor House Farm quarries along with extraction at the River Swale in the 1950s, and slightly further away, but within 2km, there are 2 historic landfill sites. Other major development in the area includes the A1(M) upgrade which is currently under construction.							
Landscape	In combination with other MWJP sites, large areas of the landscape are being irreversibly changed from their natural character, a negative							

¹³ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Impacts	cumulative impact.
Biodiversity Impacts	Cumulative impacts may occur due to loss of habitats and disturbance to species. Overall this may equate to the loss of an ecological network. In the longer term there are significant opportunities to provide benefits for biodiversity through the creation of priority habitats and the integration of sites in the area as a coherent ecological network.
Historic Environment	The area has high archaeological potential and the cumulative loss of this resource in this area constitutes a negative cumulative impact. There are also a number of historic buildings / areas of parkland in this area and cumulative visual/setting impacts are likely to occur.
Water Environment Impacts	Several sites are located along the River Swale and it is considered that pollution/sedimentation may have a cumulative impact on this water body. Following restoration there is the potential for a major positive impact in relation to the provision of additional flood storage which could have beneficial impacts further down the catchment.
Economic Impacts	Should this allocation/other proposed sites in the area go ahead, there is the potential for positive synergistic effects including the use of quarry plant at other sites (it is proposed that the rest of the reserves at the Ellerton site would be worked via the proposed Killerby site).

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on Swale Lakes SSSI, the river Swale and its tributaries and protected species including measures to address and control invasive species.
- Design to minimise the loss of best and most versatile agricultural land and to protect high quality soil resources
- Design of development and landscaping of site to mitigate impact on: heritage assets (including the Grade II Listed Building “Stable Block to Killerby Hall”), archaeological remains, local landscape features and their respective settings.
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate.
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate).
- Design to include suitable arrangements for access and use of local roads.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust, vibration and lighting.

- Appropriate restoration scheme using opportunities for habitat creation, but which is also appropriate to location within a birdstrike safeguarding zone.

MJP17 – Land to the South of Catterick

Site Name	MJP17 Land to south of Catterick (XY 424718 495031)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of Sand and Gravel from a new extraction site
Size	81.52ha
Proposed life of site	Unknown at present
Notes	The submitter is promoting the site as a replacement for the existing Scorton Quarry and the Killerby (MJP21) site once those reserves have been exhausted. Possible restoration: no detailed design yet, but may include lake(s), fen, conservation grassland agriculture and woodland.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features. 13km to west of site is North Pennine Moors SPA / SAC. SSSI: 2.3km from nearest SSSI (Swale Lakes). SINC: River Swale, Great Langton to Kiplin SINC 1km.</p> <p>Priority Habitat: Deciduous woodland adjacent (slight overlap) to south-east of site. Deciduous woodland also 170m away from south-west of site. Site visit found pond, grassland, arable, woodland / copse, hedgerows and standalone trees on site. Networks: EHN (woodland) adjacent to south-east corner of site with slight overlap with site boundary. GI: Site not within GI corridor, though the Swale Regional GI corridor lies in close proximity to the site (within 25m of north-east corner) in Richmondshire.</p> <p>Local effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that it is unlikely there would be any significant impact on the integrity of Natura 2000 or other</p>	✓	✓	✓	✓	-	-	m +

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>designated nature conservation sites.</p> <p>Protected species that could be affected include: bats, badgers, nesting birds and amphibians (e.g. great crested newt). Ecological surveys will be required in order to identify key features of ecological importance.</p> <p>There is no detailed design yet, but possible restoration may include lake(s), fen, conservation grassland, agriculture and woodland. Potentially this could deliver important biodiversity benefits, including the creation of priority habitats, provided it is implemented sympathetically with expert advice and with long term management. If wetland habitat were to be proposed, there would be a need for such proposals to consider whether the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p> <p>In summary, in the short term negative impacts are anticipated associated with the loss of habitats and disturbance to a range of species. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and management. Opportunities exist to improve the habitat networks through the creation of high quality priority habitats.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant impact on the integrity of Natura 2000 sites in the wider area.</p>							?
2. To enhance or maintain water quality and improve efficiency of	<p>Proximity of water quality / quantity receptors The site is not in a NVZ or SPZ. Site is in Humber (SUNO) RBMP. Nearest RBMP water body is 'Scurf Beck from Source to Bedale Beck' 575m to the south of the site (current ecological status is moderate, with overall potential moderate and the objective is good by 2027) while 'Swale from Muker Beck to Bedale Beck' passes to the north east of the site (current ecological status is moderate, with an overall potential of moderate – objective is good by 2027). No RBMP lakes.</p>	✓	✓	✓		-	-	+

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
water use	<p>Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The site is separated by fields from the nearest water bodies, however, to the south it drains to the 'Scurf Beck / Bedale Beck' unit. Construction work could lead to possible run off from the site or it could change the drainage regime and thus the flow rate of this water body. The site is relatively large and if wet-worked could provide a pathway for pollution to groundwater, either from removing the protection to the underlying groundwater (e.g. if fuel spilled) or could alter groundwater flow, which would have unknown effects on nearby water bodies.</p> <p>Impacts are considered to be minor negative in the short and medium term (although it is considered that successful implementation of mitigation and application of good practice measures could offset this). In the long term it is considered that opportunities exist for the improvement of water quality for based on the indicative restoration proposal, however this remains uncertain until a detailed restoration design is available.</p> <p>Plan level / regional / wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by good site management and plant maintenance.</p>							?
3. To reduce transport miles and associated emissions	<p>Proximity of transport receptors The site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside. Proposed access not yet known, but will take account of the new Catterick A1(M) roundabout in order to access the strategic road network. Light Vehicles: not yet known but NYCC have estimated 10 to 18 two-way daily movements (based on estimate of annual output); HGV Vehicles: not yet</p>		✓		✓	m-	m-	m-

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
from transport and encourage the use of sustainable modes of transportation	<p>known but NYCC have estimated 72 to 121 two-way daily movements (based on estimate of annual output).</p> <p>Net change in daily two-way trip generation: light vehicles; 0 HGVs: 0. Traffic assessment rating: Yellow <i>'The access to the site is unknown and it is also unknown if traffic from the site would utilise the Local Access Roads which will run parallel to the A1(M). If traffic from the site does utilise the Local Access Roads then the impacts of the site are likely to be minor with the local highway network avoiding passing sensitive receptors and designed to cater for future traffic levels. However If traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in significant impacts with HGVs passing through communities and potentially requiring highway upgrades.'</i>¹⁴</p> <p>PRoW: a registered PRoW crosses the site and must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 4.7km south (nearest station Leeming Bar 5.4km south-east); Strategic Road: A1(M) lies adjacent to the site; Canal / Freight waterway: Tees Navigation 20km north-east.</p>					?	?	?
	<p>¹⁴ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.</p>							

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects Access to the existing highway is currently unknown and will need to be determined by a traffic assessment. Preferred access for the site would be from the local access road which will run to the south west of the site. Works will be required to improve the existing road and extend existing footway / street lighting to improve safety at the site access.</p> <p>The traffic assessment has highlighted that 75% of demand from this area is drawn towards Teesside and the North East. According to that assessment “<i>The access to the site is unknown and it is also unknown if traffic from the site would utilise the Local Access Roads which will run parallel to the A1(M). If traffic from the site does utilise the Local Access Roads then the impacts of the site are likely to be minor with the local highway network avoiding passing sensitive receptors and designed to cater for future traffic levels. However, if traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in significant impacts with HGVs passing through communities and potentially requiring highway upgrades</i>”.</p> <p>The site would extend traffic impacts following the closure of Site MJP21, with a relatively large amount of vehicles required for the site this is expected to have a moderate negative effect with uncertainty until a site specific traffic assessment has been completed and the site access route has been determined.</p> <p>Plan level / regional / wider effects Submissions MJP17, MJP21 and MJP33 are situated in the area between Catterick to Leeming Bar, all of which have been given a yellow rating. All four sites are around the area where the A1(M) Leeming Bar to Barton upgrade is taking place. The cumulative traffic impact of the submission sites would potentially utilise the A1(M) and Local Access Roads which are currently under construction and have been designed to provide future highway capacity for these sites. On completion of the A1(M), the cumulative traffic impact of these sites is therefore not expected to be significant.</p>							

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA.</p> <p>Local effects There are farms, Rudd Hall (90m) and Ghyll Hall (90m), located close to the site that could be at risk of dust impacts (particularly during construction and restoration phases, though less so during the operational phase if this site were to be wet worked. Settlements such as Hackforth (280m south) and East Appleton (650m west) are also relatively close and may be at a lesser risk of occasional dust.</p> <p>Pollution from vehicles using the site (estimated 10 to 18 two-way daily light vehicle movements and 72 to 121 HGV two-way daily movements) would have a negative impact on air quality. If traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in air quality impacts to receptors in communities.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		m-	m-	m-
						?	?	?
5. To use soil and land efficiently and safeguard or enhance their	<p>Proximity of soil and land receptors Approximately 80% of land is in ALC Grade 3 (Good to Moderate quality), 20% (in southern part) in Grade 4 (Poor quality). No known land instability. Greenfield site. No known risk factors for contaminated land.</p> <p>Local effects There could be approximately 65ha of Grade 3 agricultural land (best and most versatile) ¹⁵</p>	✓	✓	✓		m-	m-	-

¹⁵ The best and most versatile agricultural land is ALC Grade 1 to 3a. Based on available mapping the site is located within ALC Grade 3 land, without further investigation it is not known whether it is Grade 3a or 3b. For the purposes of this SA the precautionary principle has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
quality	<p>lost. Restoration to lakes may permanently remove the productive potential of some of this land. Impacts are therefore considered to be moderate negative in the short and medium term as agricultural land is temporarily lost and minor negative in the long term as a result of the permanent loss of agricultural land.</p> <p>Plan level / regional / wider effects If 65ha of the best and most versatile agricultural land is lost at the site, it would add cumulatively to the loss of agricultural land to development land in England¹⁶.</p>							?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Deciduous woodland adjacent (slight overlap) to south east of site. Deciduous woodland also 170m away from south-west of site. Site visit found woodland / copse, hedgerows and standalone trees on site.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and including vehicle emissions that contribute to climate change, albeit lessened by this site's proximity to the A1(M) and northern markets in particular. A significant amount of energy will be required for machinery to extract the minerals from the site, with associated emissions and use of natural resources.</p> <p>Overall the site is expected to have minor negative effects on the SA Objective. An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken¹⁷.</p>	✓			✓	-	-	-
								?

¹⁶ There was 2365ha of agricultural land was lost to development in 2014/15 across England.

¹⁷ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity¹⁸ of a site Less than 5% of the site is within Flood Zones 2 and 3. Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 10% of the site. Ditches and small streams on the site are the focal point for much of the surface water flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. The EHN (woodland) is adjacent to the south-east corner of site with a slight overlap with site boundary. CFMP: Ouse CFMP / Unit: Swale Washlands / Policy 6.</p> <p>80% of land is in ALC Grade 3. 20% (in southern part) in Grade 4.</p> <p>Local effects EHN is patchy in this area, so the site will not make much difference to the capacity of the landscape for species movement under climate change (notwithstanding the large impact that a site such as this could have on the movement patterns of individual animals and plants). The site is also water compatible so flood risk is considered to be insignificant. In the long term this site could create quite a large patch of habitat which could contribute to the adaptive capacity of local biodiversity. The site is largely outside of the floodplain, so little potential for significant future flood storage exists. The extent of Flood Zone 3 is likely to increase to that of Flood Zone 2, while Flood Zone 2 may encroach onto the site further, however, as extent of extraction is currently unknown there is a high degree of uncertainty with the long term score. Climate change effects on surface water flooding noted in the SFRA are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Overall, the effects on this SA objective are likely to be minor negative although there is some uncertainty as to any long term effects post restoration of the site.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative.</p>	✓			✓	-	-	-
								?

¹⁸ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
8. To minimise the use of resources and encourage their re-use and safeguarding	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified.</p> <p><u>Local effects</u> This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p><u>Plan level / regional / wider effects</u> Considered to be the same as local effects.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste down the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	?
10. To conserve or enhance the historic environment and its setting, cultural	<p><u>Proximity of historic environment receptors</u> Conservation areas: none within 1km; Registered Parks and Gardens: Hornby Castle Park (Grade II) 3.4km north-west of site; Registered battlefields: None within 5km; World Heritage Sites: None within 5km; Scheduled monuments: 450m north-east - World War 2 fighter pens and defences at former RAF Catterick (ID 1020990), 630m north – Bainesse Roman roadside settlement and Anglian cemetery (ID 1021209), 1.2km north-east – Castle Hills medieval motte and bailey castle and 20th century airfield defences (ID 1,020,991), 1.5km west – Round Barrow 570m north of Winterfield House</p>	✓		✓	✓	m-	m-	-

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
heritage and character	<p>(ID 1021213), 2km west – Round barrow 650m north-west of Winterfield House (ID 1021212).</p> <p>Listed buildings within 1km: the closest is 140m west “Ghyll Hall” ID 1295789), 250m west “Rudd Hall” ID 1318276), Listed Buildings associated with Oran House 530m north. “Oran House, Barn With Stables And Oran Cottages Numbers One, Two and Four, Former Laundry Approximately Ten Metres North West of Oran House, Pair of Outbuildings Approximately Five Metres to North of Oran House” (ID 1301661, 1318267, 1180057, 1131497), 830m north. “Stable Block to Killerby Hall” (ID1295757), Grade II Listed Building 590m south. “Manor House Farmhouse” (ID1150926), Grade II Listed Building 870m south-east. “Bowbridge” (ID1315116), Grade II Listed Building 950m south-west. “The Greyhound Inn” (ID1315105), Grade II Listed Building 830m north-west. “the Manor House” (1315105).</p> <p>Site visit confirmed the rear elevation of Rudd Hall looks out over the landscape of the site, placement of the structure takes advantage of a natural ridge, giving panoramic views across the site. Site forms an important part of the agricultural landscape context of the building. Rear elevation of Ghyll Hall looks out over part of the site. While its place as part of the farming complex is its principal setting, the wider agricultural landscape is also important to its significance. Other heritage assets are screened by topography, vegetation and A1(M) so are not visible. No other contribution to other asset significance was observed.</p> <p>Named designed landscapes (from pre validated dataset derived from HLC): two within 2km: immediately adjacent to west is Hornby Park (HNY4249) designed landscape / unidentified parkland (Capability Brown). Killerby Hall (no recorded information) is 200m east.</p> <p>HLC Broad type – Enclosed land; HLC Type – Modern improved fields / Unknown planned enclosure. Undesignated archaeology surrounding this allocation site includes prehistoric activity including significant Mesolithic activity including flint scatters, later prehistoric pits and ditches, Romano-British activity and settlement associated with Dere Street Roman Road and medieval settlements and associated field systems. Post medieval settlement and field systems are also present within this landscape.</p>							?

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local effects An assessment of potential impacts to the historic environment, including site visit, reported that the allocation would have a moderate negative effect on the significance of the Grade II Listed Buildings “Rudd Hall” and “Ghyll Hall” due to removal of a large amount of landscape context for a temporary industrial landscape and permanent replacement of agricultural land with wetland landscape in views from the building may detract from designation significance. Operation at the site is likely to increase intrusive noise. This may be reduced to a minor negative effect on significance following landscaping of the restored site, however without a detailed design this is uncertain.</p> <p>The site allocation has two HLC types, modern improved fields and unknown planned enclosure. Part of the allocation site is modern improved fields and is a smaller part of a larger area of similar character type, of which the legibility is fragmentary. The second HLC type is unknown planned enclosure, of which the legibility is invisible. The majority of this area would be lost through mineral extraction. The proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 17% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, it is assumed that investigation works required by the Joint Plan Policy D08 (Historic Environment) ‘<i>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 before or during development.</i>’ would reduce this to a minor negative effect.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p>Plan level / regional / wider effects None noted.</p>							

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: Yorkshire Dales 9.8km away; AONBs: None within 10km; Heritage Coast: None within 10km; ITE Land: None within 5km; Locally protected landscape: No.</p> <p>NCA: Vale of Mowbray; NYLCA: 90% of site in landscape character type 25 (Settled Vale Farmland); Local LCA: North half of site is in Richmondshire (no LCA), south is in Hambleton. This is a category called 'intensively farmed lowland (varied topography)'.</p> <p>The land largely consists of large, relatively open fields. The land is undulating, with some minor ridges and it is not clear how much of the site would be visible from the A1(M).</p> <p>Light pollution: the site ranges from 0.25 to 1NanoWatts/ cm²/ sr¹⁹.</p> <p>Local effects The site is not expected to impact designated landscapes it is adjacent to Hornby Castle Park, a historic designed landscape influenced by Capability Brown which was put on the English Heritage Register in 2014 (Grade II). The site is within the setting of both Hornby Park and Lord's Lane, a tree-lined unimproved lane which lies to the south of the proposed mineral site, which formerly linked Hornby Castle with the A1 (the current minor road within the deer park was previously a private drive west of Hackforth Lodge). The site is only 300m from the hamlet of Hackforth. Mineral extraction could potentially affect the setting.</p> <p>It is unlikely that the whole of this long site could be accommodated by the landscape. The area is sensitive because of its proximity to Hornby Castle Park although the degree of inter-visibility is still to be established.</p>	✓	✓	✓	✓	m-	m-	m-
						?	?	?

¹⁹ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Intrusive mineral extraction within the A1(M) corridor could adversely affect perceptions of North Yorkshire by those passing through (some of whom will potentially be tourists). This would be compounded by views of mineral extraction to the east of the A1(M) at Killerby (MJP21).</p> <p>In terms of visual intrusion, the area is not particularly high or prominent, but there could be direct or oblique views by travellers on the upgraded and partly diverted A1(M) as it lies within the road corridor. The area is disturbed, mainly by the A1(M).</p> <p>Uncertainty is noted as this assessment is made without the benefit of appropriate site investigated assessment, and takes into account the effect of introducing mineral extraction into greenfield land which includes the setting of a registered parkland. Phasing of the work, intervening topography and blocks of woodland may reduce impact in practice, but the situation of having quarrying on both sides of the A1(M) within the same timescale should be avoided if possible.</p> <p>Plan level / regional / wider effects See above.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Site is very close to the A1(M) giving reasonably good access to York, Leeds and Teesside.</p> <p>Local effects The estimated mineral reserve at the site is 3 million tonnes of sand and gravel, with this potentially being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). However, the extraction of minerals is not considered a long term industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. The proposed life of the site is currently unknown, overall the allocation is considered to have a minor positive effect in the short term, with a neutral effect in the medium and long term following closure of the site.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓	✓	+	+	+
							?	?

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD Area is Hornby Castle – not in most deprived 20%.</p> <p>East Appleton is the nearest settlement at 620m east while Catterick is 1.2km north. Catterick Garrison 4.6km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total.</p> <p><u>Local effects</u> This is a large site that could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth in housing stock in Catterick Garrison and other nearby settlements. Restoration may provide a useful community resource.</p> <p><u>Plan level / regional / wider effects</u> The proposal for sand and gravel extraction at this site is unlikely to affect communities in the wider area.</p>	✓	✓	✓	✓	+	+	+
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Bridleway 10.61/3/1 runs across centre of site (although this route is a dead end). Next nearest Bridleway 20.2/9/1 runs 570m west; No draft common land / village greens within 500m.</p> <p><u>Local effects</u> A bridleway would need to be diverted (albeit one that is not likely to be used very much), while the site may be visible from the western bridleway. As part of the A1(M) improvements, a bridleway route is being created and Leases Lane which runs along the northern boundary of the site will act as a link. Should the site be accessed from this lane, negative impacts would also be anticipated upon bridleway users utilising this link road.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓		✓		m-	-	-
15. To protect and improve the wellbeing,	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> No schools or health centres within 1km. Nearest settlements are Hackforth at 250m south, and East Appleton 650m</p>	✓	✓	✓		-	-	+

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
health and safety of local communities	<p>west.</p> <p>Local effects Several isolated farms and buildings lie within possible range of dust and noise impacts. While traffic from the site may lead to noise, dust, vibration and reduced road safety, affecting a small number of receptors. Restoration may improve wellbeing by creating accessible countryside.</p> <p>If traffic from the site utilises Catterick Lane to the west rather than planned future local access roads then it is likely that the site would result in significant impacts with HGVs passing through communities such as Great Crakehall (creating minor impacts on local air quality for example, as well as increasing the possibility of accidents). This impact would not occur, if traffic utilised the planned local access roads.</p> <p>Plan level / regional / wider effects None noted.</p>							?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Less than 5% of the site is within Flood Zones 2 and 3. Surface water flooding low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) affects about 10% of the site. Ditches and small streams on the site are the focal point for much of the surface water flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. The site lies across five 1km squares on the Environment Agency's 'Areas Susceptible to Groundwater Flooding Map', four of which have details of levels susceptibility to groundwater flooding and one of which has no data. The 1km square at the extreme south of this site is susceptible to superficial deposits flooding (>25% to <50% of the 1km square is susceptible), while the other 1km squares are subject to Clearwater and superficial deposits flooding >25 to <50% in the centre and <25% in the north-east), apart from a 1km square along the central eastern edge of the site which is susceptible to Clearwater flooding (<25%). Less than 5% of this site is at risk from the 1:20 (5%) flood event. The site is in the Ouse CFMP / Unit: 'Swale Washlands' / Policy 6.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test undertaken for the site concluded that this site would 'Pass'. A site specific flood risk assessment should further consider climate change impact to the river flood risk, groundwater flooding and how SuDS can be used to drain the site.</p>					0	0	0

Proposed Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects None noted.							
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and provide a number of new jobs.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>		✓	✓		+	+	+
								?

Cumulative / Synergistic effects ²⁰	
Planning context	East Appleton is the nearest settlement at 620m east while Catterick is 1.2km north (both Richmondshire). Catterick Garrison 4.6km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total. Site allocations are not yet finalised in Richmondshire.
Other Minerals and Waste Joint Plan Sites	MWJP sites within 5km: MJP21 Killerby 300m east, MJP33 Home Farm 1.9km north-east, MJP43 Land west of Scruton 3.9km south-east and WJP18 Tancred 3.4km north.
Historic minerals and	Active or dormant minerals and waste sites lie within 2km including Manor House Farm active quarry 1.2km north-east, historic extraction at the River Swale 1.1km north-east. An historic landfill site is located 1km north-west and a waste water treatment works lies 700m to the

²⁰ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

waste sites	south. There will also be cumulative traffic impacts (congestion and emissions).
Landscape Impacts	In combination with other MWJP sites, large areas of the landscape are being irreversibly changed from their natural character, a negative cumulative impact.

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on Swale Lakes SSSI and protected species
- Design to minimise the loss of best and most versatile agricultural land and to protect high quality soil resources
- Design of development and landscaping of site to mitigate impact on: heritage assets (Listed Buildings including Rudd Hall and Ghyll Hall, Registered and unregistered park and gardens including Hornby Castle Park, archaeological remains), Hackforth and East Appleton villages, landscape features and their respective settings and users of the A1(M)
- Design to include suitable arrangements for access and local roads taking account of the upgrades to the A1(M) including the Local Access Road.
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) including the bridleway along Ghyll Lane.
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust.
- Appropriate restoration scheme using opportunities for habitat creation, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland within a birdstrike safeguarding zone and location and proximity to the Hornby Castle Park Registered Park and Garden.

MJP17 – Land to the South of Catterick – EXCLUDED AREA

Site Name	MJP17 Land to south of Catterick (XY 424442 494164)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of Sand and Gravel from a new extraction site
Size	20.58ha
Proposed life of site	Unknown at present
Notes	<p>The excluded area of MJP17 is a parcel of land adjacent to the south west boundary of the allocated site MJP17 (for information about the allocated area of MJP17 see Appendix 1 to the Minerals and Waste Joint Plan).</p> <p>The submitter is promoting the site as a replacement for the existing Scorton Quarry and the Killerby (MJP21) site once those reserves have been exhausted.</p> <p>Possible restoration: no detailed design yet, but may include lake(s), fen, conservation grassland agriculture and woodland.</p>

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Note: This assessment relates to the excluded area of land south-west of the MJP17 allocated site (see Appendix 1 for the assessment of the allocated area), and where possible, has assessed sustainability effects specific to this excluded area. However, it is only possible to assess some of the SA objectives in conjunction with the allocated part of the MJP17, for example, vehicle movements are assumed to be the same for the excluded and allocated areas of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-	<p><u>Proximity of international / national and local designations and key features</u> 13km to west of site is North Pennine Moors SPA / SAC. SSSI: 2.3km from nearest SSSI (Swale Lakes). SINC: River Swale, Great Langton to Kiplin SINC 1km.</p>	✓	✓	✓	✓	-	-	m+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
diversity and improve habitat connectivity	<p>GI: Site not within GI corridor, though the Swale Regional GI corridor lies in close proximity to the site (within 25m of north-east corner) in Richmondshire.</p> <p>Local effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that it is unlikely there would be any significant impact on the integrity of Natura 2000 or other designated nature conservation sites.</p> <p>Protected species that could be affected include: bats, badgers, nesting birds and amphibians (e.g. great crested newt).</p> <p>There is no detailed design yet, but possible restoration may include lake(s), fen, conservation grassland, agriculture and woodland. Potentially this could deliver important biodiversity benefits, including the creation of priority habitats, provided it is implemented sympathetically with expert advice and with long term management. If wetland habitat were to be proposed, there would be a need for such proposals to consider whether the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p> <p>In summary, in the short term negative impacts are anticipated associated with the loss of habitats and disturbance to a range of species. This disturbance continues into the medium term. Impacts in the long term depend on the ability to secure a high quality restoration and management. Opportunities exist to improve the habitat networks through the creation of high quality priority habitats.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant impact on the integrity of Natura 2000 sites in the wider area.</p>							?
2. To enhance or maintain water quality	<p>Proximity of water quality / quantity receptors. The site is not in a NVZ or SPZ. Site is in Humber (SUNO) RBMP. Nearest RBMP water body is 'Scurf Beck from Source to Bedale Beck' 575m to the south of the site (current ecological status is moderate, with overall potential moderate and the objective is good by</p>	✓	✓	✓		-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and improve efficiency of water use	<p>2027) while 'Swale from Muker Beck to Bedale Beck' passes to the north east of the site (current ecological status is moderate, with an overall potential of moderate – objective is good by 2027). No RBMP lakes. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The site is separated by fields from the nearest water bodies, however, to the south it drains to the 'Scurf Beck / Bedale Beck' unit. Construction work could lead to possible run off from the site or it could change the drainage regime and thus the flow rate of this water body. The site is relatively large and if wet-worked could provide a pathway for pollution to groundwater, either from removing the protection to the underlying groundwater (e.g. if fuel spilled) or could alter groundwater flow, which would have unknown effects on nearby water bodies.</p> <p>Impacts are considered to be minor negative in the short and medium term (although it is considered that successful implementation of mitigation and application of good practice measures could offset this). In the long term it is considered that opportunities exist for the improvement of water quality for based on the indicative restoration proposal, however this remains uncertain until a detailed restoration design is available.</p> <p>Plan level / regional / wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by good site management and plant maintenance.</p>							
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The MJP17 allocated site is adjacent to the A1 giving reasonably good access to York, Leeds and Teesside. Proposed access not yet known, but will take account of the new Catterick A1(M) roundabout in order to access the strategic road network.</p> <p>Light Vehicles: not yet known but NYCC have estimated 10 to 18 two-way daily movements (based on estimate of annual output); HGV Vehicles: not yet known but NYCC have estimated 72 to 121 two-way daily movements (based on estimate of annual output).</p> <p>Net change in daily two-way trip generation: light vehicles; 0 HGVs: 0. Traffic assessment rating: Yellow <i>'The access to the site is unknown and it is also unknown if traffic from the site would utilise the Local Access Roads which will run parallel to the A1. If traffic from the site does utilise the Local Access Roads then the impacts of the site are likely to be minor with the local highway network avoiding passing sensitive receptors and designed to cater for future traffic levels. However, If traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in significant impacts with HGVs passing through communities and potentially requiring highway upgrades.'</i>²¹</p> <p>PRoW: a registered PRoW crosses the site and must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 4.7km south (nearest station Leeming Bar 5.4km south-east); Strategic Road: A1 lies adjacent to the site; Canal / Freight waterway: Tees Navigation 20km north-east.</p> <p>Local effects Access to the existing highway is currently unknown and will need to be determined by a traffic assessment. Preferred access for the site would be from the local access road which will run to the south west of the site. Works will be required to improve the existing road and extend existing footway / street lighting to improve safety at the site access.</p>		✓		✓	m-	m-	m-
						?	?	?

²¹ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The traffic assessment has highlighted that 75% of demand from this area is drawn towards Teesside and the North East. According to that assessment “<i>The access to the site is unknown and it is also unknown if traffic from the site would utilise the Local Access Roads which will run parallel to the A1. If traffic from the site does utilise the Local Access Roads then the impacts of the site are likely to be minor with the local highway network avoiding passing sensitive receptors and designed to cater for future traffic levels. However, if traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in significant impacts with HGVs passing through communities and potentially requiring highway upgrades</i>”.</p> <p>The site would extend traffic impacts following the closure of Site MJP21, with a relatively large amount of vehicles required for the site this is expected to have a moderate negative effect with uncertainty until a site specific traffic assessment has been completed and the site access route has been determined.</p> <p><u>Plan level / regional / wider effects</u> Submissions MJP17, MJP21 and MJP33 are situated in the area between Catterick to Leeming Bar, all of which have been given a yellow rating. All four sites are around the area where the A1 Leeming Bar to Barton upgrade is taking place. The cumulative traffic impact of the submission sites would potentially utilise the A1 and Local Access Roads which are currently under construction and have been designed to provide future highway capacity for these sites. On completion of the A1, the cumulative traffic impact of these sites is therefore not expected to be significant.</p>							
4. To protect and improve air quality	<p><u>Proximity of air quality receptors</u> Site is not within a Hazardous Substances Consent Zone or within 2km of an AQMA. Properties located in the vicinity of the excluded area include Ghyll Hall Farm 150m north, Rudd Hall Farm 350m north, the settlement of Hackforth is located 250m south.</p> <p><u>Local effects</u> There are potential dust impacts to isolated properties near to the site and within Hackforth (particularly during construction and restoration phases, though less so during the operational phase if this</p>		✓	✓		m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>site were to be wet worked.</p> <p>Pollution from vehicles using the site (estimated 10 to 18 two-way daily light vehicle movements and 72 to 121 HGV two-way daily movements) would have a negative impact on air quality. If traffic from the site does route to the west via Catterick Lane then it is likely that the site would result in air quality impacts to receptors in communities.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors The site is on ALC Grade 4 land (poor quality). No known land instability. Greenfield site. No known risk factors for contaminated land.</p> <p>Local effects There could be approximately 20.58ha of ALC Grade 4²² agricultural land lost, this land is not best and most versatile, considered a minor negative effect. Restoration to lakes may permanently remove the productive potential of some of this land. Impacts are therefore considered to be moderate negative in the short and medium term as agricultural land is temporarily lost and minor negative in the long term as a result of the permanent loss of agricultural land.</p> <p>Cumulatively the excluded area will not add to the loss of the best and most versatile land from the MJP17 allocated area.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		-	-	-
6. Reduce the causes of climate	<p>Proximity of factors relevant to exacerbating climate change Isolated trees on the site.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p>	✓			✓	-	-	-

²² The best and most versatile agricultural land is ALC Grade 1 to 3a.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>Plan level / regional / wider effects Although there is the potential for the loss of some small amounts of habitats with carbon storage potential this impact is considered insignificant. However, the traffic from this site would be significant and including vehicle emissions that contribute to climate change, albeit lessened by this site's proximity to the A1 and northern markets in particular. A significant amount of energy will be required for machinery to extract the minerals from the site, with associated emissions and use of natural resources.</p> <p>Overall the site is expected to have minor negative effects on the SA Objective. An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken.</p>							?
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity²³ of a site The excluded area is in Flood Zone 1. CFMP: Ouse CFMP / Unit: Swale Washlands / Policy 6.</p> <p>Site is on ALC Grade 4 agricultural land.</p> <p>Local effects English habitat network habitats are patchy in this area, so the site will not make much difference to the capacity of the landscape for species movement under climate change (notwithstanding the large impact that a site such as this could have on the movement patterns of individual animals and plants). The excluded area is in Flood Zone 1 and sand and gravel is considered water compatible.</p> <p>In the long term this site could create quite a large patch of habitat (alongside the MJP17 allocated area)</p>	✓			✓	-	-	+

²³ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>which could contribute to the adaptive capacity of local biodiversity.</p> <p>Overall, the effects on this SA objective are likely to be minor negative due to loss of on-site habitats, although there is some uncertainty as to any long term effects post restoration of the site.</p> <p>Plan level / regional / wider effects None noted.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective. Uncertainty due to the unknown life of the site.</p> <p>Plan level / regional / wider effects Considered to be the same as local effects.</p>	✓		✓		--	--	--
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste down the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	?
10. To conserve or	<p>Proximity of historic environment receptors Conservation areas: none within 1km; Registered Parks and Gardens: Hornby Castle Park (Grade II) adjacent to the western carriageway of Catterick Lane which runs</p>	✓		✓	✓	--	--	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
enhance the historic environment and its setting, cultural heritage and character	<p>adjacent to the western boundary of the excluded area. Registered battlefields: None within 5km; World Heritage Sites: None within 5km; Scheduled monuments: 450m north-east - World War 2 fighter pens and defences at former RAF Catterick (ID 1020990), 630m north – Bainesse Roman roadside settlement and Anglian cemetery (ID 1021209), 1.2km north-east – Castle Hills medieval motte and bailey castle and 20th century airfield defences (ID 1,020,991), 1.5km west – Round Barrow 570m north of Winterfield House (ID 1021213), 2km west – Round barrow 650m north-west of Winterfield House (ID 1021212).</p> <p>Listed buildings within 1km: the closest is 140m west “Ghyll Hall” ID 1295789), 250m west “Rudd Hall” ID 1318276), Listed Buildings associated with Oran House 530m north. “Oran House, Barn With Stables And Oran Cottages Numbers One, Two and Four, Former Laundry Approximately Ten Metres North West of Oran House, Pair of Outbuildings Approximately Five Metres to North of Oran House” (ID 1301661, 1318267, 1180057, 1131497), 830m north. “Stable Block to Killerby Hall” (ID1295757), Grade II Listed Building 590m south. “Manor House Farmhouse” (ID1150926), Grade II Listed Building 870m south-east. “Bowbridge” (ID1315116), Grade II Listed Building 950m south-west. “The Greyhound Inn” (ID1315105), Grade II Listed Building 830m north-west. “the Manor House” (1315105).</p> <p>Site visit confirmed the rear elevation of Rudd Hall looks out over the landscape of the site, placement of the structure takes advantage of a natural ridge, giving panoramic views across the site. Site forms an important part of the agricultural landscape context of the building. Rear elevation of Ghyll Hall looks out over part of the site. While its place as part of the farming complex is its principal setting, the wider agricultural landscape is also important to its significance. Other heritage assets are screened by topography, vegetation and A1 so are not visible. No other contribution to other asset significance was observed.</p> <p>Named designed landscapes (from pre validated dataset derived from HLC): two within 2km: immediately adjacent to west is Hornby Park (HNY4249) designed landscape / unidentified parkland (Capability Brown). Killerby Hall (no recorded information) is 200m east.</p> <p>HLC Broad type – Enclosed land; HLC Type – Modern improved fields / Unknown planned enclosure. Undesignated archaeology surrounding this allocation site includes prehistoric activity including significant Mesolithic activity including flint scatters, later prehistoric pits and ditches, Romano-British activity and</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>settlement associated with Dere Street Roman Road and medieval settlements and associated field systems. Post medieval settlement and field systems are also present within this landscape.</p> <p>Local effects The excluded area of MJP17 is in close proximity to the Registered Park and Garden at Hornby Castle and is likely to have a high negative effect on the setting of this important asset.</p> <p>An assessment of potential impacts to the historic environment, including site visit, reported that the allocation (including the MJP17 allocated site) would have a moderate negative effect on the significance of the Grade II Listed Buildings “Rudd Hall” and “Ghyll Hall” due to removal of a large amount of landscape context for a temporary industrial landscape and permanent replacement of agricultural land with wetland landscape in views from the building may detract from designation significance. Operation at the site is likely to increase intrusive noise. This may be reduced to a minor negative effect on significance following landscaping of the restored site, however without a detailed design this is uncertain.</p> <p>The site allocation has two HLC types, modern improved fields and unknown planned enclosure. Part of the allocation site is modern improved fields and is a smaller part of a larger area of similar character type, of which the legibility is fragmentary. The second HLC type is unknown planned enclosure, of which the legibility is invisible. The majority of this area would be lost through mineral extraction. The proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, it is assumed that investigation works required by the Joint Plan Policy D08 (Historic Environment) ‘<i>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 before or during development.</i>’ would reduce this to a minor negative effect.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: Yorkshire Dales 9.8km away; AONBs: None within 10km; Heritage Coast: None within 10km; ITE Land: None within 5km; Locally protected landscape: No.</p> <p>NCA: Vale of Mowbray; NYLCA: 90% of site in landscape character type 25 (Settled Vale Farmland); Local LCA: North half of site is in Richmondshire (no LCA), south is in Hambleton. This is a category called 'intensively farmed lowland (varied topography)'.</p> <p>The land largely consists of large, relatively open fields. The land is undulating, with some minor ridges and it is not clear how much of the site would be visible from the A1(M).</p> <p>Light pollution: the site ranges from 0.25 to 1NanoWatts/ cm²/ sr²⁴.</p> <p>Local effects The site is not expected to impact designated landscapes it is adjacent to Hornby Castle Park, a historic designed landscape influenced by Capability Brown which was put on the English Heritage Register in 2014 (Grade II). The site is within the setting of both Hornby Park and Lord's Lane, a tree-lined</p>	✓	✓	✓	✓	m-	m-	m-

²⁴ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>unimproved lane which lies to the south of the proposed mineral site, which formerly linked Hornby Castle with the A1 (the current minor road within the deer park was previously a private drive west of Hackforth Lodge). The site is only 300m from the hamlet of Hackforth. Mineral extraction could potentially affect the setting.</p> <p>It is unlikely that the whole of this long site could be accommodated by the landscape. The area is sensitive because of its proximity to Hornby Castle Park although the degree of inter-visibility is still to be established. Intrusive mineral extraction within the A1(M) corridor could adversely affect perceptions of North Yorkshire by those passing through (some of whom will potentially be tourists). This would be compounded by views of mineral extraction to the east of the A1(M) at Killerby (MJP21).</p> <p>In terms of visual intrusion, the area is not particularly high or prominent, but there could be direct or oblique views by travellers on the upgraded and partly diverted A1(M) as it lies within the road corridor. The area is disturbed, mainly by the A1(M).</p> <p>Uncertainty is noted as this assessment is made without the benefit of appropriate site investigated assessment, and takes into account the effect of introducing mineral extraction into greenfield land which includes the setting of a registered parkland. Phasing of the work, intervening topography and blocks of woodland may reduce impact in practice.</p> <p>Plan level / regional / wider effects See above.</p>					?	?	?
12. Achieve sustainable economic growth and create and	<p>Proximity of factors relevant to sustainable economic growth Site is very close to the A1 giving reasonably good access to York, Leeds and Teesside.</p> <p>Local effects The estimated mineral reserve at the site is 1.2 million tonnes of sand and gravel, with this potentially being made available to the market. This would make a significant contribution to the building</p>	✓	✓	✓	✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
support jobs	<p>sector by helping to boost supply of a key building material (as well as supporting freight driving jobs). However, the extraction of minerals is not considered a long term industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. The proposed life of the site is currently unknown, overall the allocation is considered to have a minor positive effect in the short term, with a neutral effect in the medium and long term following closure of the site.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>						?	?
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD Area is Hornby Castle – not in most deprived 20%.</p> <p>East Appleton is the nearest settlement at 620m east while Catterick is 1.2km north. Catterick Garrison 4.6km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total.</p> <p><u>Local effects</u> This is a large site that could support a modest amount of jobs in extraction and freight. It would also supply a useful supply of building materials to support the planned growth in housing stock in Catterick Garrison and other nearby settlements. Restoration may provide a useful community resource.</p> <p><u>Plan level / regional / wider effects</u> The proposal for sand and gravel extraction at this site is unlikely to affect communities in the wider area.</p>	✓	✓	✓	✓	+	+	+
14. To provide opportunities to enable	<p><u>Proximity to recreation, leisure and learning receptors</u> Bridleway 10.61/3/1 is 220m north of the site (although this route is a dead end). No draft common land / village greens within 500m.</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
recreation, leisure and learning	<p>Local effects There may be minor noise and amenity impacts to users of a bridleway to the north of the site. Should the site be accessed from Catterick lane, negative impacts would also be anticipated upon bridleway users utilising this link road.</p> <p>Plan level / regional / wider effects None noted.</p>							?
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlements are Hackforth at 250m south, and East Appleton 650m west.</p> <p>Local effects Several isolated farms and buildings lie within possible range of dust and noise impacts. While traffic from the site may lead to noise, dust, vibration and reduced road safety, affecting a small number of receptors. Restoration may improve wellbeing by creating accessible countryside.</p> <p>If traffic from the site utilises Catterick Lane to the west rather than planned future local access roads then it is likely that the site would result in significant impacts with HGVs passing through communities such as Great Crakehall (creating minor impacts on local air quality for example, as well as increasing the possibility of accidents). This impact would not occur, if traffic utilised the planned local access roads.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		-	-	+
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones The site is within Flood Zone 1.</p> <p>Local effects The excluded area is in Flood Zone 1 and sand and gravel is considered water compatible.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population.</u> The site does not conflict with any known allocations in other plans.</p> <p><u>Local effects.</u> The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and provide a number of new jobs.</p> <p><u>Plan level / regional / wider effects.</u> The site may also support markets outside of the Plan area.</p>		✓	✓		+	+	+
								?
Cumulative / Synergistic effects²⁵								
Planning context	Catterick Garrison 4.6km west is expected to accommodate 1,900 additional houses up to 2028, 62% of the Richmondshire total. Site allocations are not yet finalised in Richmondshire.							
Other Minerals and Waste Joint Plan Sites	MJP21 Killerby 300m east, MJP33 Home Farm 1.9km north-east, MJP43 Land west of Scruton 3.9km south-east and WJP18 Tancred 3.4km north.							
Historic minerals and waste sites	Active or dormant minerals and waste sites lie within 2km including Manor House Farm active quarry 1.2km north-east, historic extraction at the River Swale 1.1km north-east. An historic landfill site is located 1km north-west and a waste water treatment works lies 700m to the south. There will also be cumulative traffic impacts (congestion and emissions).							
Landscape Impacts	In combination with other MWJP sites, large areas of the landscape are being irreversibly changed from their natural character, a negative cumulative impact.							
Limitations / data gaps								

²⁵ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on habitats and protected species.
- Design of development and landscaping of site to mitigate impact on: heritage assets (Listed Buildings including Rudd Hall and Ghyll Hall, Registered and unregistered park and gardens including Hornby Castle Park, archaeological remains), Hackforth and East Appleton villages, landscape features and their respective settings and users of the A1.
- Design to include suitable arrangements for access and local roads taking account of the upgrades to the A1 including the Local Access Road.
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) including the bridleway along Ghyll Lane.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust.
- Appropriate restoration scheme using opportunities for habitat creation, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland within a birdstrike safeguarding zone and location and proximity to the Hornby Castle Park Registered Park and Garden.

Appendix 3e: Assessment of Sites in the Harrogate District

Minerals and Waste Joint Plan

Contents

ALLOCATED SITES			
Reference	Site Name	Type of site	Page
MJP14	Ripon Quarry, North Stainley	Extraction of sand and gravel	4
MJP10	Potgate Quarry, North Stainley	Extraction of Magnesian Limestone	21
WJP08	Allerton Park, near Knaresborough	Retention of landfill and associated landfill gas utilisation plant and use of site for growth of energy/ biomass crops beyond 2018.	42
WJP24	Potgate (former plant site), North Stainley	Recycling of inert construction and demolition waste for secondary aggregates	58

EXCLUDED/ DISCOUNTED SITES			
Reference	Site Name	Type of site	Page
MJP05	Lawrence House Farm, Scotton	Extraction of sand and gravel	68
MJP35	Ruddings Farm, Walshford	Extraction of sand and gravel	85
MJP37	Moor Lane Farm, Great Ouseburn	Extraction of sand and gravel	101
MJP39	Quarry House, West Tanfield	Extraction of sand and gravel	118
MJP41	Scalibar Farm, Knaresborough	Extraction of sand and gravel	135
MJP51	Great Givendale, Ripon	Extraction of sand and gravel	152
MJP15	Blubberhouses Quarry, west of Harrogate	Extraction of silica sand	168
MJP32	Barsneb Wood, Markington	Extraction of sandstone	185

Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

MJP14 – Ripon Quarry, North Stainley

Site Name	MJP14 Land in Vicinity of Ripon Quarry, North Stainley (XY 430558 476313)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel as proposed extension to existing quarry
Size	30.22ha
Proposed life of site	15 years
Notes	Possible restoration: Lake, reed bed and wet woodland. The site is subject to a planning application (NY/2011/0429/ENV) which is awaiting determination, note the planning application also includes an additional parcel of land to the north of MJP14.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: 10km west - North Pennine Moors Special Protection Area / Special Area of Conservation (SPA / SAC); Site of Special Scientific Interest (SSSI): the extension area is bounded by the Ripon Parks SSSI and River Ure Bank Ripon Parks SSSIs including the High Batts Nature Reserve². Sites of Importance for Nature Conservation (SINC): Norton Mills (1km), Hall Garth Ponds (1.3km). Local Nature Reserve (LNR): Nosterfield 2km north-west.</p> <p>UK Priority Habitats: Deciduous woodland adjacent to the north, south and east of the site (possibly some overlap). South-west corner of site also contains some deciduous woodland (circa 5% of area). Woodland is also located at western edges approximately 60m to 70m from the site.</p> <p>Ecological Networks (EN): Living Landscape: Site entirely within River Ure Corridor; England Habitat</p>	✓	✓	✓	✓	-	-	+

²² These SSSI areas do not form part of the proposed extension area.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Network (EHN): core woodland envelope of EHN overlaps north, east and south-west of site southern site and western edge of northern site.</p> <p>Ecological surveys for the planning application (NY/2011/0429/ENV) documented within an Environmental Statement³ (ES) reported that the site is mostly arable farmland with trees, hedgerow and woodland as boundary features. The site has the potential to support foraging bat, badger, otter, nesting and farmland birds. Great crested newt is known locally from ponds within the Ripon Parks SSSI.</p> <p>Local effects Potential Impacts include direct and indirect impacts upon the adjacent Ripon Parks SSSI, particularly in relation to changes in hydrology/ effects on the underlying aquifer. Some habitats within the SSSI are groundwater fed, as are habitats in the current quarry restoration and SINCs. Operations within the quarry have the potential to impact on these habitats through draw down of water during pumping.</p> <p>The ES reported no major significant adverse impacts on nature conservation are expected as a result of development at the site. The site is unlikely to have any direct impacts to the Ripon Parks SSSI due to the proximity of extraction limits, or any other sites designated for nature conservation. There is the potential for short-term temporary impacts on a small number of bird species that use arable land.</p> <p>Invasive species are known to be present within this river corridor and the connectivity with the river and instances of flooding provide an opportunity for species to be spread, though this does not represent a significant increase from the current threat.</p> <p>In terms of geodiversity, these sites may have long term implications in terms of preventing restoration of the geomorphology of the river. The potential for the river to move in its flood plain should not be constrained by the creation of landforms which prevent that movement, e.g. proposals for lakes or bund.</p> <p>There are potential cumulative negative impacts associated with quarrying in this area, including loss of habitat and disturbance to species which may result from this quarry combined with the existing Ripon Quarry and Potgate Quarry. Cumulative benefits associated with appropriate restoration at this and other quarries, including creation of priority habitats, are likely to occur in the long term.</p>							?
³ Hanson, 2011.	Environmental Statement – Extension to Existing Sand and Gravel Works at Ripon Quarry, North Stainley, North Yorkshire							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>As with other wet restoration schemes restoration to deep lakes is less beneficial to biodiversity, so shallow areas and other habitats such as wet woodland / other priority habitat can offer greater benefits. The ES details restoration has also considered the proximity of RAF Leeming, Dishforth and Topcliffe which lie 12.1km from the site and the birdstrike safeguarding zone⁴.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant impact on the integrity of European sites.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Nitrate Vulnerable Zone (NVZ): the site is within a NVZ for surface water and groundwater; Source Protection Zone (SPZ): Not in or adjacent to SPZ; River Basin Management Plan (RBMP): Nearest water body, extension area is bounded by 'River Ure from Thornton Steward Beck to River Skell' - ecological quality is moderate / chemical quality is 'does not require assessment; Overall status is moderate; Objective - good by 2027. No RBMP lakes present. RBMP groundwater: Site in Swale, Ure, Nidd, Ouse (SUNO) Magnesian Limestone groundwater body (quantitative quality good / chemical quality good / at risk). Objective - good by 2015.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The ES site identifies dewatering as a key impact on groundwater and associated receptors. It is proposed to dewater the site with discharge used for mineral washing (then settling out and discharge) with the remainder being discharged to the River Ure. This is expected to create a temporary drawdown in groundwater levels during the working period. This could affect the groundwater under the Ripon Parks SSSI, though the hydraulic connection between the surface water and the groundwater is considered to be limited. Nonetheless, the ES predicts the need to continually monitor water levels and "<i>a water level management plan will be put in place</i>". The River Ure is also identified as a receptor for impacts as this will recharge the site (resulting in water loss); though through discharge of clean water to the river this is predicted to balance the situation.</p>	✓	✓	✓	✓	-	-	?

⁴ Comments received from the Ministry of Defence have been taken in to consideration when designing the restoration. Areas of open water have been minimised as far as possible to deter flocking birds and reed planting with fencing will be established as a further deterrent but provide attractive habitat for other smaller birds such as reed bunting (Please see ES for further detail)

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Groundwater drawdown may also affect the Lightwater stream to the south, though “<i>according to the geological map the vicinity of the site comprises alluvium and clay till which will limit the amount of outflow from the stream</i>”⁵. Other impacts recognised in the ES include possible pollution of groundwater from fluid loss / spillage from plant and ingress of suspended solids to the River Ure. Mitigation measures are proposed for all these impacts to bring these impacts within acceptable levels, and it is assumed the environmental permitting system would mitigate any impacts during operation. However, without mitigation, such impacts could be significant.</p> <p>As this site is not in a SPZ it may be less vulnerable than some other sites. Restoration may help to provide better protection to groundwater, depending on its design (though movement of overburdens during restoration may have water impacts of its own).</p> <p>Plan level / regional / wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by the environmental permitting system during operation.</p>							
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of	<p>Proximity of transport receptors The site has reasonable access to the A1(M) giving reasonably good access to York, Leeds and Teesside. Access: confirmed to be the existing Ripon Quarry access onto A6108 (approximately 460m south of North Stainley) with the mineral to be moved to the existing plant site without passage on the highway; Light Vehicles; 16 (based on application details NY/2011/0429/ENV); Heavy Goods Vehicles (HGV): 80 to 150* (based on application details NY/2011/0429/ENV including comment *if additional processing capacity installed).</p> <p>Net change in daily two-way trip generations: Light vehicles: 0; HGVs: 0. Transport assessment rating: Green – ‘<i>Expansion of existing site to allow continued working when present reserves are exhausted. The traffic impacts of the submission are likely to remain at present levels, thus resulting in no overall impact.</i>’⁶</p> <p>Public Right of Way (PRoW): this site is affected by a registered PRoW which must be kept clear of any</p>		✓		✓	-	-	0

⁵ Hanson, 2011. Extension to Existing Sand and Gravel Workings at Ripon Quarry, North Stainley, North Yorkshire: Environmental Statement Section 7: Hydrogeology and Hydrology.

⁶ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
transportation	<p>obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 11.7km east / Railhead: 49.7km south-east; Strategic Road: A1(M) 4.2km east (direct); Canal / Freight waterway: 5.6km south.</p> <p>Local effects The 80 to 150 HGV's per day would access the site turning on and off the road south of North Stainley (however, journeys would also be saved by processing the mineral at the adjacent plant site). HGV movement is acceptable on to the A6108, but minor works may be required to improve the existing access arrangements. A traffic assessment and / or travel plan would be required. The planning application suggests that vehicle numbers are in line with historic numbers from the existing plant, and the traffic assessment undertaken to support the Joint Plan indicates that the A6108 is currently used by around 3000 vehicles over a typical 12 hour working day, including 300 HGVs, so levels would effectively remain the same. However, in this assessment we have viewed traffic impacts as a continuation of impacts into the longer term and have noted a minor negative effect due to the continued number of HGVs (which otherwise would have been expected to cease) and the need for further improvements to access. There are few local opportunities for sustainable transport.</p> <p>Plan level / regional / wider effects It is also noted that increase in demand at the Clock Tower junction in Ripon will need to be established and may need a revised routing plan, adding uncertainty to the assessment.</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors The site is not within a hazardous substances consent zone or within 2km of Air Quality Management Areas (AQMA). Norton Mills Farm 260m north. Middle Parks Farm 120m south. Badger Bank (settlement) 450m north. Norton Conyers 750m to the east.</p> <p>Local effects The ES states "<i>The likelihood of problems caused by dust will be largely influenced by the</i></p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p><i>effectiveness of on-site environmental control. Given the intended dust control measures and method of working, the site can continue to be operated with minimal impact on nearby residential properties and boundary locations</i>⁷. In addition “A full PM10 assessment in line with the latest recommendations has been undertaken and this clearly shows that the Air Quality Objectives are not expected to be exceeded”. Therefore, the site is considered to have a minor negative effect.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): 95% of site in Grade 3; thin strip of Grade 2 along eastern boundary. Greenfield site – no known risk factors for contaminated land. The site does not lie within or adjacent to a development high risk area (coal mining).</p> <p>Local effects Up to 30.22ha of possible best and most versatile agricultural land (Grade 2 and Grade 3) land will be lost⁸.</p> <p>Plan level / regional / wider effects If best and most versatile agricultural land is lost at the site, it would add cumulatively to the loss of agricultural land to development land in England. However, the loss is considered to be a small in relation (0.09%) to the overall agricultural land lost in England per annum to development⁹ but could have a small scale effect on national food production capacity.</p> <p>The overall level of contribution to the objective is considered to be minor negative.</p>	✓		✓		-	-	-
								?

⁷ Citation needed

⁸ The best and most versatile agricultural land is ALC Grade 1 to 3a. Based on available mapping the site is located within ALC Grade 3 land, without further investigation it is not known whether it is Grade 3a or 3b. For the purposes of this SA the precautionary principle has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

⁹ 30.22ha (assuming all land is best and most versatile) annualised across the 15 year life of the site would be an annual 2.01ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 2.01ha loss would represent a 0.09% contribution to this category of soil loss across England for each year of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Deciduous woodland adjacent to north, south and east of site (possibly some overlap). Site visit revealed trees and a hedgerow on site.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects A small amount of carbon storage habitat may be lost, though the effect of this on this objective is negligible. The site is expected to maintain current traffic volumes at the existing Ripon Quarry (Light Vehicles – 16, HGV – 80 to 150). Access to the road network is good, however minerals would still need to travel to likely markets in York, Leeds and Teesside generating vehicle emissions that contribute to climate change. A significant amount of energy will be required for machinery to extract the minerals from the site, with associated emissions and use of natural resources.</p> <p>Overall, effects on this SA objective are considered moderate negative in the short and medium term, falling to minor negative if the northern site continues to operate in the longer term. An assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors must be undertaken¹⁰.</p>	✓		✓		m-	m-	-
								?
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity of a site Flooding: the site is in Flood Zones 2 and 3. It is also identified as being at historic flood risk. About 5% of the site is also subject to surface water flooding, which includes small areas at 1:30 (3.33%) high risk of flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses. Within the Ouse Catchment Flood Management Plan (CFMP): Upper Ure and Swinney Beck /</p>	✓	✓	✓	✓	-	-	+

¹⁰ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>Policy 6.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Ecological Networks: Living Landscape: Site entirely within River Ure Corridor NY10; England Habitat Network (EHN): Core woodland envelope of EHN overlaps north, east and south-west of site southern site and western edge of northern site.</p> <p>95% of site in ALC Grade 3; thin strip of Grade 2 along eastern boundary.</p> <p>Local effects The site is at risk from the 1:20 (5%) event and Flood Zones 2 and 3, as such climate change is likely to increase the depth of flooding over the site compared to present day for these event scenarios. Although site is water compatible, the high risk of flooding to this site suggests the need for flood emergency planning. In the longer term, there is the potential for these sites to offer flood storage to the wider catchment. Ecological networks are unlikely to be affected due to these sites not disrupting significant parts of the corridors. However, restoration in the long term would strengthen networks.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified</p> <p>Local effects This site will extract virgin sand and gravel which will be unavailable for future use (unless recycled). This is considered to have a high negative effect on the SA objective.</p> <p>Plan level / regional / wider effects Considered to be the same as local effects.</p>	✓			✓	--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified</p> <p><u>Local effects on the waste hierarchy</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation Areas: none within 1km; Registered Parks and Gardens: circa 70m from Norton Conyers Registered Parks and Garden (Grade II) (Designation ID 10001068). Registered battlefields: None within 5km; World Heritage Sites: None within 5km.</p> <p>Scheduled Monuments within 2km: 1.6km to south of site is 'Nunwick Henge', 1.4km north of site is 'East Tanfield Deserted Medieval Settlement' and 1.1km west of site is 'Castle Dikes Defended Roman Villa'.</p> <p>Listed buildings: 1km from the site Grade II* Middle Parks Farm.</p> <p>Named designated landscape (from pre-validated dataset derived from Historic Landscape Characterisation (HLC)); HNY22399 (no name listed) ornamental parkland 70m east of the site.</p> <p>HLC Broad Type - enclosed land / HLC Type – modern improved fields. The site lies within an area of high</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>archaeological significance and sensitivity, which contains a number of prehistoric monuments and deposits that have been the subject of recent investigation and publication. The Thornborough Henges landscape is considered to be internationally significant. In addition, undesignated archaeology includes evidence of finds and features of early prehistoric date and Bronze Age round barrow burial sites.</p> <p>In terms of archaeology, there were no archaeological features or deposits identified in the site, although there are deposits of Iron Age / Romano-British date within the top soil storage area which it is assumed will be excluded from any direct impacts.</p> <p>Local effects The HLC type of this area is modern improved fields. The site is a smaller part of a much larger area of similar character type, of which the legibility is fragmentary. Proposed extraction is unlikely to have a major impact upon the HLC of the immediately surrounding area. However, it is acknowledged that within the site, the HLC will become invisible as development will replace an earlier field system. As 20% of the overall HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>The existing archaeological deposits include remains of lesser significance. It is assumed that the archaeological impact will occur throughout the duration of extraction, with investigation works required by the Joint Plan Policy D08 (Historic Environment) – ‘<i>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 before or during development.</i>’, expected to mitigate the impact to buried archaeology and this is considered a minor negative effect.</p> <p>A visual assessment was carried out / examined the proposed development area from Norton Conyers Registered Park and Garden and concluded “<i>The key consideration in relation to the cultural landscape has been potential effects of the proposed scheme upon the setting of the Norton Conyers estate. Overall, it is considered that the change to the setting of Norton Conyers is negligible during extraction and that the proposed mitigation measures would ensure enhancement of its setting upon restoration using a combination of off and on-site native tree planting</i>” (refer to ES for further details).</p> <p>Plan level / regional / wider effects None noted.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; Areas of Outstanding Natural Beauty (AONBs): Nidderdale 3km west; Heritage Coast: None within 10km; Inheritance Tax Exemption Land (ITE) land: Norton Conyers ITE land is 66m east; National Character Area (NCA): Southern Magnesian Limestone. Green Belt: not within the Green Belt.</p> <p>North Yorkshire Landscape Character Assessment (NYLCA): landscape character type 24: river floodplain (farmed, lowland and valley landscapes). High visual sensitivity (as a result of the predominantly open character and flat landform which facilitates long distance open views across the landscape). High ecological sensitivity as result of the patchwork of habitats. High landscape and cultural sensitivity as a result of the presence of numerous historic settlement sites and designated landscapes, coupled with a dynamic landscape pattern of narrow river corridors. District LCA: 'River Ure Corridor' in Harrogate LCA.</p> <p>Intrusion: Undisturbed. The area is fairly tranquil. Urban intrusion: The wider context is rural but there is local intrusion from the existing active quarry. The A6108 corridor, North Stainley and the Lightwater Valley theme park are 1km to 2km to the west. Light pollution: the site ranges from <0.25 to 0.5NanoWatts/ cm²/ sr¹¹.</p> <p>Local effects The site is an extension to an existing quarry which has been in operation for 50 years. Much of the existing quarry has now been restored and includes areas of wetlands, grassland, woodland and agriculture. During extraction there would be a temporary negative impact upon the landscape character. However, it is considered that the proposals are in accordance with Policy C2¹², as impacts would lessen to become slightly beneficial upon final restoration due to the introduction of a network of open water, wetland and woodland habitats, diversifying the existing agricultural landscape character and nature conservation value of the site. Visually the site is very well screened from view by the existing mature trees which enclose the majority of the site. Local settlements are not likely to be affected and North Stainley lies just over 1.3km to the west of the site. There is intervening woodland and riverside screening along the River Ure. The</p>	✓		✓		-	-	0

¹¹ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

¹² The preservation of the local landscape character is also a key consideration, highlighted by the Harrogate District Local Plan Policy: Policy C2: Landscape Character “Development should protect existing landscape character. In locations where restoration of the landscape is necessary or desirable, opportunities should be taken for the design and landscaping of development proposals to repair or reintroduce landscape features, to the extent that this is justified by the effects of the proposal.”

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>current quarry does not impact on the settlement. Overall, due to the limited number of visual receptors within the local area, the visual impact during the extraction phase is considered to be minor negative. The negative score takes account of the proposed mitigation measures that would be implemented prior to and at the establishment phase. Post construction, the residual visual impact of the quarrying operation is considered following restoration, including any mitigation proposals. The overall significance of visual impact following restoration is considered to be negligible.</p> <p>The floodplain landscape type within which the site is located is being heavily exploited at a number of locations in North Yorkshire, resulting in large scale disturbance and the creation after restoration of areas of new landscape character which are likely to be unstable in the long term because they do not reflect geomorphological / fluvial processes as the previous landscapes largely did (although modified and protected by man in more recent times). However within the timescale of this assessment the wet restoration scheme proposed can be accommodated, and can be acceptable on visual and landscape character grounds. There is however an issue with the impact on the registered parkland of Norton Conyers which will have direct views of the site. It will be important for mitigation to be aligned with Norton Conyers.</p> <p>There could also be direct impacts on vistas from the Ripon Rowel and on the river corridor setting. There may also be cumulative effects from 'a possible future quarried landscape' / from other sites.</p> <p>It would be desirable to allow the river in this area to meander (a big lake would prevent the meander). Historic meanders are visible.</p> <p>Levels of visual intrusion will not increase as the site is low lying and largely screened by trees from views from the wider landscape.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> The site is reasonably well linked to the access to the A1(M) giving reasonably good access to York, Leeds, Harrogate and Teesside.</p> <p><u>Local effects on sustainable economic growth</u> The estimated mineral reserve at the site is 3.5 million tonnes of sand and gravel, with this potentially being made available to the market over the lifetime of the site. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight jobs). However, the extraction of minerals is not considered a sustainable industry as the economic boost and jobs provided at the site is limited to the lifetime of mineral extraction. Overall the allocation is considered to have a minor positive effect in the short term and medium term (the 15 years the site would be operational), with a neutral effect in the long term following closure of the site.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓		✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Index of Multiple Deprivation (IMD) Area - Kirkby Malzeard / Wathvale – not in most deprived 20%.</p> <p>Norton Mills Farm is 260m north. Middle Parks Farm is 120m south. Badger Bank (settlement) is 450m north. Norton Conyers is 750m east. North Stainley lies 1.3km west, while Wath is 1.4km east and Nunwick is 1.9km south.</p> <p><u>Local effects</u> The site would support a small number of jobs leading to minor positive impacts in the short and medium term and negligible to minor positive impacts in the long term. Whilst the site would provide a source of sand and gravel which could aid future development, it is considered that the immediate settlements are unlikely to directly benefit in any significant way. In the long term it is considered that the restoration scheme has the potential to boost tourism in the area through the creation of new habitats (which could be made accessible).</p> <p><u>Plan level / regional / wider effects</u> Not applicable to this site.</p>		✓	✓	✓	+	+	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Rights of way: bridleway 15.103/8/1 within 20m west of the northwest corner. The long distance right of way called the 'Ripon Rowel' follows this part of the bridleway also at 20m.</p> <p>Local effects The site is close to the Ripon Rowel. The current planning application, by way of mitigation, proposes to separate the access track from the bridleway / Ripon Rowel walk where they intersect. While a different application may ultimately come forward for this site we have scored these impacts without mitigation assuming the development would be phased in similar way to the current planning application.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	0
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Norton Mills is 260m north. North Parks is 120m south. Badger Bank (settlement) 450m north. Norton Conyers is 750m east. Nearest farm building is 850m south. No schools, hospitals, health centres or clinics within 1km. High pressure gas pipeline Feeder 7 crosses the site.</p> <p>Local effects The high pressure gas pipeline would require suitable arrangement for the retention or re-routing for safety purposes. A continuation of traffic would occur on the A6108, though the current low volumes on this road mean that air pollution and accident effects are of low significance.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	-	-	0
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Flooding: the site is in Flood Zones 2 and 3. It is also identified as being at historic flood risk. About 5% of the site is also subject to surface water flooding, which includes small areas at 1:30 (3.33%) high risk of flooding. However, as extraction is likely to change the topography of the site where flooding occurs across this site is likely to change as extraction progresses.</p> <p>The site lies across two 1km squares in the Environment Agency's Areas Susceptible to Groundwater Flooding maps, with the southern part of the site is in a km square that is >50 <75% at risk of superficial</p>	✓	✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>deposits flooding.</p> <p>According to the planning application for this site <i>“in order to facilitate mineral extraction, it is proposed to continue the current practice of lowering the natural groundwater level by dewatering. It is envisaged that the water table will be lowered to around 8.6m below ground level”</i>.</p> <p>The 1:20 (5%) event extent mapping for this SFRA shows that 100% of this site is at flood risk.</p> <p>Within the Ouse Catchment Flood Management Plan (CFMP): Upper Ure and Swinney Beck / Policy 6.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test undertaken for the site concluded that this site would ‘Pass’. A site specific flood risk assessment has already been submitted for this site which concluded that the site would require an evacuation plan, that work stop during high rainfall events, and that works will have little potential to impact on the flows in the River Ure¹³. Although site is water compatible, the high risk of flooding to this site suggests the need for flood risk emergency planning. In the longer term, there is the potential for the site to offer flood storage to the wider catchment, although there is some uncertainty over the capacity of storage that would be provided as the quarry void may simply fill with groundwater following dewatering.</p> <p>Plan level / regional / wider effects None noted.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>		✓	✓		+	+	0

¹³ Hafren Water, 2011. Flood Risk Assessment for Ripon Quarry Extension into Pennycroft Area [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=8225>]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
manner								
Cumulative / Synergistic effects¹⁴								
Planning context	North Stainley is 1.3km west, Wath is 1.4km east, Nunwick is 1.9km south. North Stainley and Wath are Group C settlements (only very limited growth). Although the local development framework has no allocations development plan documents in place, the earlier 2001 Local Plan shows no allocations within 200m this site.							
Other Minerals and Waste Joint Plan Sites	MWJP sites within 5km: WJP24 Potgate Quarry (2.3km west), MJP06 Langwith Hall Farm (4.5km north), MJP07 (5km north), MJP10 Potgate Quarry (2.1km west).							
Historic minerals and waste sites	Active Magnesian limestone site at Potgate 2.4km west. Dormant sand and gravel at Haw Wood 3.7km west. Active sand and gravel site at Nosterfield 2.5km north. Numerous historic applications are clustered around Nosterfield 3.8km north-west, West Tanfield 1.4km north-west and North Stainley 0.2km north-west. Group of historic application to the south-west of North Stainley 1.7km west. Fewer applications to the south (2 around Sutton Grange 1.9km south). Landfill: Nearest is 'land to the north of Moor Lane' 1.9km north-west.							
Landscape Impacts	There may be cumulative landscape effects from 'a possible future quarried landscape' / from other sites							
Limitations / data gaps								
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.								

¹⁴ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on the Ripon Parks and River Ure Bank Ripon Parks SSSIs and the River Ure to demonstrate that minerals extraction at this site will not destroy or damage the interest features for which the High Batts, Ripon Parks and River Ure Bank Ripon Parks SSSIs are designated and in respect of protected species including measures to address and control invasive species.
- Suitable arrangements for retention or diversion of gas pipeline (as appropriate).
- Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources.
- Design of development and landscaping of site to mitigate potential impacts on: heritage assets (Listed Buildings including at Norton Conyers, Norton Conyers Registered Park and Garden), local landscape features and their respective settings.
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate and mitigation of any hydrogeomorphic impacts on the river, its tributaries and on groundwater supplies.
- Design to include suitable arrangements for public rights of way and the Ripon Rowel Walk (diversion or retention, and associated mitigation, as appropriate).
- Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust
- Appropriate restoration scheme using opportunities for habitat creation, but which is also appropriate to location within a birdstrike safeguarding zone.

MJP10 Potgate Quarry, North Stainley

Site Name	MJP10 Potgate Quarry, North Stainley, Ripon, HG4 3JN (XY 427689 476336)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of magnesium limestone as proposed extension to existing quarry
Size	36.5ha of which working area would be 19.4ha
Proposed life of site	16 years
Notes	Arable agriculture with some biodiversity habitats (woodland, pasture, conservation grassland, hedgerows, pond, exposed rock faces and screes). An area of land to the west of the site, Musterfield, was granted planning permission (NY/2012/0319/ENV) on 30 January 2015.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	<p><u>Proximity of international / national and local designations and key features</u> Natura 2000: North Pennine Moors SPA/SAC is 8km west. SSSI: 1.55km east of site is Ripon Parks SSSI. 2.86km to the south is Cow Myers SSSI. 3.1km west is Hack Fall Wood SSSI. Five Ponds Wood ratified SINC is immediately adjacent to the south-west corner of the site. No further SINC are within 2km.</p> <p>Priority Habitat: Deciduous woodland patches touch the edges of southern and eastern boundaries of the site (very small overlap may be mapping anomaly). More deciduous woodland to north east about 45m</p>	✓	✓	✓	✓	-	0	0

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
connectivity	<p>away. Core EHN woodland buffer overlaps fringes of south of site.</p> <p>Site visit: Pasture / grassland, hedgerows and standalone trees on site.</p> <p>Local effects The site is currently used for arable agriculture and therefore the current biodiversity interest of this site is relatively low. Any hydrological links between the proposed site and Ripon Parks SSSI need to be investigated as changes to surface or groundwater resulting from extraction have the potential to impact upon the SSSI. Impacts from dust deposition also need considering.</p> <p>Five Ponds Wood SINC could be compromised in its functional connectivity with other habitats and hydrology by being bordered by high cliffs (with only a thin corridor remaining to connect this site to the wider landscape when other extant quarries are considered). There are, therefore, concerns as to whether the wood will retain ecological connectivity or become isolated. A minor adverse effect on the SINC is predicted, hence the updated score which reflect any pre mitigation. This would require attention at the project level should the site be selected.</p> <p>Habitats of importance on site include old hedgerows and mature trees. Protected species that may be affected by this development include foraging bats, badger, great crested newt (which is known to be present on the existing Potgate quarry), nesting birds and brown hare. There is a veteran oak on site. Losses of habitats and species could be cumulative with other sites.</p> <p>This site provides a major opportunity to create calcareous grassland priority habitat and is only currently found in small isolated fragments within the area. There are already commitments within the existing quarry restoration to create calcareous grassland and this could be further expanded – providing a more viable management unit to a future grazier. This would provide an extremely valuable resource for a range of associated species. Any benefit could be maximised by aligning with existing commitments and restoration at other nearby sites and ensuring the restoration is managed.</p> <p>Plan level / regional / wider effects Due to the distance and type of development, it is unlikely that there would be any significant effects on Natura 2000 sites. The nationally designated Ripon Parks SSSI, Cow</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Myers SSSI and Hack Fall Wood SSSI are possible receptors to this site, dust would be unlikely to have a significant effect due to distance, while hydrological effects could only occur if there were a hydrological link. As this site is likely to be extracted above the water table (based on extraction at the current site ¹⁵) potential impacts are only likely to occur as a result of fuel spills migrating through the bedrock to the aquifer, which can be mitigated for through good site management. Specific reference to potential hydrological impacts on Ripon Parks SSSI can be made within development management measures to be considered in any future application where appropriate. However, should extraction require going below the water table, a hydrological survey will be required.							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors The site is in a Nitrate Vulnerable Zone for surface and groundwater. Source Protection Zone: none within the site, the closest is approximately 60m south-west. River Basin Management Plan (RBMP): the nearest RBMP water body, at 560m east is the River Ure from Thornton Steward Beck to River Skell – ecological quality is moderate / chemical quality is 'does not require assessment and is at the other side of North Stainley so no surface connectivity. Overall status is moderate. Objective – good by 2027. No RBMP lakes present. Lightwater Stream is 1.1km due south. Groundwater: SUNO Magnesian Limestone – quantitative quality good / chemical quality good / at risk-objective: good by 2027.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Because this site is in a NVZ, local water bodies may be vulnerable during the restoration phase of the project if soils or fertilisers are managed. As with all mineral site there is a risk of water pollution from run off of overburden and fuel from the site, which could affect water quality without mitigation. The site is not a Source Protection Zone and the site appears distant from any sensitive surface water bodies or sites. The neighbouring quarry application NY/2012/0319/ENV states that there are no</p>		✓	✓		0	0	0

¹⁵ A screening letter for a recent proposal at Gebdykes Quarry detailed that working stone at 115m Above Ordnance Datum (AOD) would not affect the groundwater level and that the site would remain above the water table. Site MJ10 is adjacent and upslope from this site and it is therefore not expected to affect groundwater level.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>obvious points of groundwater ingress into existing quarry excavations and that application would not expect to have significant impacts on groundwater flow / no requirement for dewatering, while pollution of groundwater from spills of fuel and lubricants can be managed via appropriate storage and emergency procedures. Detail on how water would be managed at this site has been provided by the applicant, who has stated that the base of the quarry would be kept at 2m above the water table and that pumping would not occur, with rainfall filtering through the limestone. As there is no direct discharge to surface watercourses, groundwater flows and recharge would be unaffected. In addition, the site is situated largely on the impervious Middle Permian Marl, which would significantly reduce risks to water sensitive receptors to the east such as the River Ure or Ripon Parks SSSI¹⁶.</p> <p>Although surface water would eventually drain through fissures to the River and Lightwater Stream, both are some distance away which is likely to allow settlement of pollutants, which in any case would be managed by routine management measures.</p> <p>Therefore, simply extending routine management measures would be likely to reduce any risks to groundwater and surface water a negligible level. Most impacts would be expected to be managed via an environmental permit.</p> <p>Plan Level / regional / wider effects None noted.</p>							
3. To reduce transport miles and associated emissions from transport and	<p>Proximity of transport receptors The site is reasonably accessible to the A1(M) giving reasonably good access to York, Leeds and Teesside. Access: to be into the western field of MJP10 from the Potgate Quarry through the Musterfield extension, material would then leave the site via the existing access along Water Lane onto the A6108 approximately 100m south of North Stainley. There would be no direct access</p>		✓		✓	-	-	0

¹⁶ Saul, 2016. 'Proposed Extension to Potgate Quarry: Potential Effects on the Water Environment of the Area' in Lightwater Quarries, 2016. Response to NYCC Joint Minerals and Waste Plan SA Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
encourage the use of sustainable modes of transportation	<p>to MJP10 from the public highway.</p> <p>HGV Vehicles: 90 to 160 two-way movements. Light Vehicles: 32 two-way movements (traffic levels are expected to be similar to existing levels at the Potgate quarry) ¹⁷.</p> <p>PRoW: material would leave the site via an access along Water Lane which is a bridleway.</p> <p>Rail: 14km east / Railhead: 51km south; Strategic Road: A1(M) is 6.1km east (direct), 13km along roads; Canal / Freight waterway: Ouse 6.75km south.</p> <p>Local effects The site traffic will potentially meet traffic from North Stainley as well as other quarry traffic and possibly traffic associated with Lightwater Valley so there may be cumulative impacts on local roads from traffic. However, these are likely to be an extension of existing impacts to some extent as the site is an extension to an existing quarry (so impacts endure for longer). Access would be along Water Lane which is a bridleway leading to potential disturbance of bridleway users and methods of sustainable transport.</p> <p>According to a Highways Assessment, HGV movement is acceptable onto the A6108, though minor works may be required to improve the existing access arrangements. A transport plan and travel assessment will be required to identify if there any sustainable transport opportunities. The Highways Assessment noted that while this is an existing site, the vehicles generated may have an additional impact as the area is already heavily used by HGVs. We have considered this to be an extension of existing impacts (which would otherwise have subsided).</p> <p>Plan level / regional / wider effects It should be noted that an important indirect effect of not having this quarry is noted, which is that customers in the centre and east of the county would be poorly served in terms of Magnesian Limestone. This would have an indirect effect of driving demand for longer distance journeys, therefore this site is considered to have a minor positive impact on reducing long distance travel</p>							

¹⁷ It is estimated that vehicle movements will be lower than those assigned to this site due to the current site's operations strategy, which involves dividing sales between this site and Gebdykes Quarry more evenly. The applicant has stated that this is likely to reduce vehicle numbers by about 1/3 at this site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>in the region.</p> <p>Overall the site is expected to have a minor negative effect in the short and medium term and a neutral effect in the long term following site closure.</p>							
4. To protect and improve air quality	<p>Proximity of air quality receptors No hazardous substance consent sites or AQMAs within 2km. North Stanley is 450m north-east. An outlet shopping centre is 500m south-east. Lightwater Valley 500m south-east. Musterfield (2 dwellings) is 300m south-west. Friars Hurst at 150m north. Isolated properties / farms also occasionally around site. Priority Habitat: Deciduous woodland patches touch the edges of southern and eastern boundaries of the site.</p> <p>Local effects This site is relatively close to Musterfield and Friar's Hurst, which could be within range of quarry dust and traffic dust impacts (depending on routes taken). Other receptors are more distant, though may still be within range of occasional low level dust impacts from smaller particles so dust assessment would be needed. The assessment notes that past complaints due to dust have not been noted and that the number of receptors is relatively small. Similarly dust may impact on habitats next to the site, though as woodland sites these are thought to be of low sensitivity and the effect is likely to be insignificant. The neighbouring site (planning application NY/2012/0319/ENV) utilises a dust action plan to minimise dust nuisance. Without mitigation impacts are considered to be potentially up to a minor effect, though mitigation could reduce these impacts to a negligible level.</p>		✓	✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Dust on the access roads least will not be significant if wheel washing takes place as the access road is tarmac.</p> <p>Plan level / regional / wider effects The site is relatively close to the A1(M) providing relatively good access for vehicles. The site is expected to generate 90 to 160 two-way HGV movements and 32 light vehicle two-way movements daily. The vehicles required for the site are estimated to be lower than current levels¹⁸, however the site would extend the use of vehicles at the site and contribute to vehicle emissions. This should be balanced by the consideration that limestone would likely come from further afield without this site (ultimately producing more pollution). We have rated this effect as a negligible to minor negative effect at maximum as it will combine with the particulate pollution of other vehicles, with uncertainty over the indirect effects of not having this quarry.</p> <p>Overall we consider that effects would be negligible to minor negative with some uncertainty resulting from the indirect effects of not having this quarry. Mitigation measures such as wheel washing and a dust action plan would help to reduce any adverse impacts.</p>					?	?	?
5. To use soil and land efficiently and safeguard or	<p>Proximity of soil and land receptors Agricultural land – ALC Grade 3 (good to moderate quality) land. This is a green field site - no known contaminated land risk factors. Coal mining subsidence: Site does not lie within or adjacent to a development high risk area.</p>		✓	✓		m -	m -	?

¹⁸ It is estimated that vehicle movements will be lower than those assigned to this site due to the current site's operations strategy, which involves dividing sales between this site and Gebdykes Quarry more evenly. The applicant has stated that this is likely to reduce vehicle numbers by about 1/3 at this site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
enhance their quality	<p>Local effects Extraction operations would result in the temporary loss of up to 36.5ha of possible best and most versatile agricultural land¹⁹. Agricultural land is farmed adjacent to the site and there is a risk of contamination to soil and crops as well as potential risk to livestock. Impacts are therefore considered to be moderate negative in the short and medium term, with uncertainty, as agricultural land is temporarily lost. The applicant has stated that a 'strip till drilling' technique of farming will be implemented post restoration, which is likely to improve soil quality in comparison to other restored sites. In the longer term effects will potentially improve as the site is restored, though is uncertain whether this will be an improvement on the baseline.</p> <p>Plan level / regional / wider effects The loss of best and most versatile agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered to be a small in relation to the overall agricultural land lost in England per annum to development²⁰ but could have a small scale effect on national food production capacity.</p>					?	?	

¹⁹ The best and most versatile agricultural land is ALC Grade 1 to 3a. Based on available mapping the site is located within ALC Grade 3 land, without further investigation it is not known whether it is Grade 3a or 3b. For the purposes of this SA the precautionary principle approach has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

²⁰ 36.5ha (assuming all land is best and most versatile) annualised across the 16 year life of the site would be an annual 2.3ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 2.3ha loss would represent a 0.09% contribution to this category of soil loss across England for each year of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Priority Habitat: Deciduous woodland patches touch the edges of southern and eastern boundaries of the site (very small overlap may be mapping anomaly). Hedgerows and standalone trees on site.</p> <p>Local effects Although small areas of carbon storage habitat are on site, the loss of this would be negligible in terms of this objective.</p> <p>Plan level / regional / wider effects An annual output of up to 380,000 tonnes per year²¹ would significantly and permanently add to greenhouse gas emissions due to the energy required to extract and transport these primary materials (though the site is relatively close to markets and the operator utilises a 'multi drop, zero waste' transit system which ensures net lorry miles are reduced). A minor impact would come from traffic from the site which would need to ship limestone off site, an extension of impacts into the future rather than new traffic. In the longer term / post construction, the situation would become more positive as habitats / biomass planned as part of the restoration scheme for this site start to establish. Arguably not producing minerals at this site would result in a similar amount of minerals being produced somewhere else, potentially further away from the markets served by Potgate Quarry, which would in effect be worse for climate change.</p>	✓		✓		m -	m -	? -
7. To respond and adapt to the effects of	<p>Proximity of factors relevant to the adaptive capacity²² of a site This site is in Flood Zone 1. About 5% of this site is in areas subject to surface water flooding (low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)). Climate change would not affect the site in the latter part of the Plan period. Catchment Flood Management</p>	✓	✓	✓	✓	m -	m -	- -

²¹ Proposals for new mineral extraction at a rate in excess of 75,000 tonnes per annum should be accompanied by an assessment showing how the design for the proposal has taken into account the need for resilience to climate change factors. These thresholds are based on the 75,000 tonnes per annum threshold for strategically significant waste facilities used in the Yorkshire and Humber Waste Position Statement, which has been applied also to minerals output for the purposes of Development Management, Policy D11.

²² Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
climate change	<p>Plan (CFMP): Ouse CFMP / River Washburn unit / Policy 6. Core EHN woodland buffer overlaps fringes of south of site. In Wharfe and Lower Ouse CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The site is subject to a negligible degree of surface water (not fluvial) flooding and would be 'less vulnerable' in terms of the categories of development promoted by the planning system. There appears to be some risk that connectivity between priority woodland patches could be lost and impair the movement of species vulnerable to climate changes. In addition, it is unlikely the short and medium term development of the site will provide an opportunity to deliver climate change adaptations, mainly due to potential loss of best and most versatile agricultural land.</p> <p>Potential planting to connect woodland sites during operation, and further creation of habitats during restoration is likely to result in steadily lessening moderate negative effects in the short to medium term and minor negative effects with a degree of uncertainty on this objective in the long term.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for limestone. However, it may to a degree offset recycled materials that could potentially replace limestone (though source material may be limited in the market catchment of this site). All primary minerals sites work against the SA objective to a degree, so score negatively.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation areas: none within 1km; Registered parks and gardens: Norton Conyers (Grade II, ID 1001068) 3.1km east, Hackfall (Grade I, ID 1000130) 3.1km west, Studley Royal (Grade I, ID 1000410) 3.1km west; Registered battlefields: None within 5km; World Heritage Sites: Studley Royal Park including the ruins of Fountains Abbey” (1000130) 3.1km west; Scheduled monuments: “East Tanfield deserted medieval village” (1016260) 1.7km north-east, “Castle Dikes defended Roman villa (1017467) 1.3km south-east, “Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow” (1004912) 2.5km north. Recorded on the Historic England Monuments At Risk Survey</p> <p>Listed buildings: Grade II Listed Building “Friars Hurst” (1315294) 290m north. 5 Grade II Listed Buildings “Sleningford Park, Stables Approximately 150 Metres South-West of Sleningford Park, Barn Approximately 150 Metres South of Sleningford Park, Dovecote Approximately 200m south-west of Sleningford Park, Gate Piers and Gates and Railings approximately 300m to South-East of Sleningford Park” (1150580, 1315295, 1150582, 1150581, 1315296) 600m north. 4 Grade II Listed Buildings “Old Sleningford Hall And Attached</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Garden Wall, Stables approximately 30m North-East of Old Sleningford Hall, Gates, Gate Piers and Flanking Walls With Railings Approximately 100 Metres South of Old Sleningford Hall, Well Cover Opposite Gates To Old Sleningford Hall” (1150583, 1295839, 1315297, 1174338) 600m north. 4 Grade II Listed Buildings “Stainley Hall, Stables Approximately 50 Metres North-East of Stainley Hall, Gatepiers and Gates to Stainley Hall, Gazebo” (1174130, 1150619, 1150577, 1315293) 800m east</p> <p>Named designed landscape: Azerley Chase Deer Park and Former Azerley Park circa. 2km south-west, 3 further areas highlighted within 1km of the site.</p> <p>HLC Broad type – enclosed land / HLC Type – Modern improved fields. Undesignated archaeology in this area includes evidence from aerial photographic transcriptions of a landscape containing a number of sites and features of probable later prehistoric and Romano-British date. These are located both within the proposal allocation site, and in the fields to the immediate north and south east. They comprise a number of rectilinear ditched enclosures, suggestive of settlement sites with associated trackways and boundary features.</p> <p>The HLC type of this area is modern improved fields. As the allocation site is a smaller part of a much larger area of similar character type, of which the legibility is partial, the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area. However, it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 20% of the overall HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>The enclosure to the south east has been archaeologically investigated in advance of the currently permitted quarrying. This has revealed evidence for settlement activity, as well as human burials of the Iron Age period. A desk based assessment of the site’s historic environment provided by the submitter concludes that ‘<i>The recent work on Potgate Quarry has shown that application site contains archaeological remains relating to a mixed field system of a late Iron Age and Roman date. Whilst the crop marks have been identified as part of a wider archaeological resource on the Magnesian limestone ridge they are a relatively common feature and compare poorly to other notable sites to the south in terms of their extent</i></p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p><i>and complexity.</i></p> <p>'There is, therefore, high potential for associated remains of later prehistoric/Romano-British settlement and burial activity to survive within the allocation area.</p> <p>Local effects An assessment of impacts to the historic environment undertaken for the site reported that the site would result in moderate effect on the Grade I listed building 'Friars Hurst' due to a loss of agricultural context. This significance of effect is likely to reduce to minor effect, if adequate screening is retained and maintained on the north site boundary. Impacts to all other designated assets were considered to have no effect on significance.</p> <p>There is high potential for the survival of archaeological remains within the site and although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out. It is assumed that the archaeological impact will occur throughout the duration of extraction. It is assumed that without mitigation mineral extraction will result in the permanent and total destruction of the undesignated archaeological remains. However, it is assumed that Joint Plan Policy D08 (Historic Environment) – '<i>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 before or during development.</i>', would be adhered to and this would result in an overall minor effect on buried archaeology .</p> <p>The excavations as Potgate have, however, provided an excellent opportunity to investigate the chronology and development of the enclosures and answer important questions about their function. The inclusion of the application area as an extension to Potgate Quarry will provide further opportunity to study these crop marks in detail and go some way in addressing the need for further research and investigation"²³.</p>							

²³ Mike Griffiths and Associates Ltd, 2016. The Historic Environment of Potgate Quarry: Addendum to desk based assessment Minerals Plan Application Area, March 2016 in Lightwater Quarries, 2016. Response to NYCC Joint Minerals and Waste Plan SA Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects None noted.							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; AONBs: Nidderdale is 60m to the west; Heritage Coast: None within 10km; ITE: Norton Conyers 2.9km east. Locally protected landscape: Harrogate Local Plan Special Landscape Area 4.8km to south. Core Strategy Policy EQ2 recognises special landscape areas as part of the suit of green assets that contribute to the district's character; Site not in Green Belt.</p> <p>NCA: Southern Magnesian Limestone; NYLCA: 6- Magnesian Limestone Ridge – increased pressure for quarrying of the limestone resource resulting in potentially intrusive landscape features, potential damage to archaeological monuments / their setting and deposits as a result of mineral extraction; District LCA: Harrogate LCA - North Ripon Farmland.</p> <p>Intrusion: Undisturbed. Urban Intrusion: The site is rural and according to the CPRE 2007 mapping the context is relatively undisturbed, but the existing quarry and the Lightwater Valley theme park/shopping attraction lie to the south and detract from the experience of tranquillity. Light pollution: the site ranges from <0.25 to 1NanoWatts/ cm²/ sr²⁴.</p> <p>The site lies between around 60m to 90m Above Ordnance Datum (AOD) on the north-east facing slope of a minor ridge (just over 100m in height and on the edge of the AONB). The ridge represents the highest point locally of the escarpment of the Southern Magnesian Limestone NCA. To the east the land falls away gently to the River Ure Valley which cuts through the NCA, and beyond this the limestone escarpment continues to undulate gently at a lower level towards the Vale of Mowbray.</p> <p>Local / plan level / regional / wider effects There are potential impacts to distant views of parts of the quarry due to its elevation and open aspect. Also, the development of the extension would potentially remove screening hedgerow (with some mature trees) and existing screening landform and although working downslope and seeding and planting worked slopes above would help reduce visual impact. It is</p>	✓	✓	✓	✓	-	-	--

²⁴ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>unlikely that the low level restored landscape could be satisfactorily integrated. Fiveponds Wood SINC would be left surrounded on three sides by lower land. This is a topographical effect with planting of restored quarry slopes potentially helping with visual integration.</p> <p>Potentially restoration between the existing quarry and its proposed extension would reveal an unnatural landform consisting of a shorter but deep but relatively narrow channel between Fiveponds Wood SINC and the minor ridge to the west. At present the Musterfield extension would form the largely concealed upper part of a 'valley' connected with the existing quarry, and it represents the furthest extent of extraction that has previously been considered desirable.</p> <p>Overall, the short, medium and long effects are considered to be negative from the landscape perspective but the scope for mitigation has been identified, potentially avoiding major negative effects during operations. Restoration enhancements including hedgerow restoration, creating more diverse habitats and increasing recreational use could of course be carried out without quarrying so are a neutral issue in assessing landscape effects.</p> <p>It has been demonstrated that some mitigation of the works would be feasible, taking account of minor variations in topography and introducing carefully sited screen planting.</p> <p>Plan level / regional / wider effects This site may potentially affect the setting of the Nidderdale AONB due to its proximity. Outward views from within the AONB would need to be checked through an appropriate assessment in the case of a future planning application. However, it is expected that effects are unlikely to be significant.</p> <p>The higher parts of the proposed quarry are likely to be most visible as there is a minor intervening crest centred on the small copse in the centre of the site helping to screen some views from the east, including the settlement of Stainley. There could be some views towards the site from the north-east. There is scope for partial mitigation of distant view through creating bunds with advance planting though sufficient time would be needed for this to become effective, and it could appear unnatural in close views. To the north the River Ure floodplain is concealed by topography, but there could be distant views from areas of higher land</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>which it could be difficult to mitigate though the significance would need to be assessed through appropriate assessment. Views to the west are constrained by topography and vegetation as are views to the south.</p> <p>In the long term, post restoration, a new landscape would have been created, possibly with limestone outcrops and low level pasture, and with new hedgerows. However, the degree to which it would integrate with the surrounding countryside, which includes areas of some historic landscape value, remains questionable given the unlikely topography which would remain.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> The site is reasonably accessible to the A1(M) giving reasonably good access to York, Leeds and Teesside.</p> <p><u>Local Effects</u> The estimated mineral reserve at this site is 3.7 million tonnes of limestone being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material (as well as supporting freight jobs). However, the success of the operation is based on both Potgate (MJP10) and MJP11 (Gebdykes) quarries working together and being able to supply the concrete batching facility on site.</p> <p>In addition, assessment of this site has shown the interdependent link between this site and the development of North Stainley Village, and the continued development of the site will continue to help drive employment opportunities, for instance on the site itself and by supporting the opportunities for economic growth in North Stainley, through helping to provide a favourable environment for business and public services to grow. Indeed, future proposals for the village, dependent in part on income from the wider estate including the quarry, include business opportunities such as equestrian facilities and new retail facilities²⁵. This results in a moderate positive score, with some uncertainty in the long term depending on whether future plans for North Stainley Garden Village are realised.</p> <p><u>Plan level / regional / wider effects</u> None noted</p>		✓	✓	✓	m +	m +	m +

²⁵ Rural Solutions, 2016. North Stainley Garden Village: Towards a zero carbon future.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability IMD Area: Kirkby Malzeard – not in most deprived 20%. North Stainley is 450m north-east. An outlet shopping centre is 500 m south-east. Lightwater Valley 500m south-east. Musterfield is 300m south-west. Friars Hurst at 150m north.</p> <p>Local Effects The site would support a small number of jobs in quarrying and freight leading to minor positive impacts in the short and medium term. In addition, the linkages between the Quarry, the estate and the North Stainley Village suggest that the quarry is an important link in ensuring the economic and community vitality of North Stainley.</p> <p>There is, however, some concern over traffic impacts around North Stainley (depending on route taken). Overall a moderate positive effect with some uncertainty.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	m +	m +	m +
						?	?	?
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Rights of Way: Bridleway 15.102/9/1 runs along eastern boundary of site. Bridleway 15.102/10/2 runs parallel to eastern boundary at 430m east. Footpath 15.102/7/1 parallel to north eastern boundary at 455m north-east. Footpath 15.102/3/1 lies 410m north. Footpath 15.102/2/1 lies 440m north. No common land or village greens within 500m.</p> <p>Local Effects Footpaths are generally relatively distant from this site and may be out of range of dust, though noise (particularly if blasting occurs) and visual impacts might still occur. The one exception is Bridleway 15.102/9/1 which runs along eastern boundary of site. This could be impacted by noise, dust and visual impacts. Anecdotal evidence provided by the applicant suggests that to date this has not been a</p>		✓	✓		m -	m -	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>particular issue²⁶, though the potential for future impacts remains. Screening along the boundary site would potentially mitigate impacts to the bridleway.</p> <p>Overall effects are considered moderate negative in the short to medium term prior to any mitigation in the form of footpath diversions taking place. In the longer term the restoration of this site as part of this proposal is likely to be highly positive for recreation due to the creation of high quality countryside.</p> <p>Plan level / regional / wider effects None noted.</p>							?
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing North Stainley is 450m north-east. An outlet shopping centre is 500m south-east. Lightwater Valley 500m south-east. Musterfield is 300m south-west. Friars Hurst is 150m north. Isolated properties / farms also occasionally around site - closest North Stainley Hall at 450m south-east. School in North Stainley is 650m north-west. No health centres, hospitals or clinics.</p> <p>Local effects Dust may affect some isolated nearby receptors such as Musterfield and noise could be an issue to even greater distances if blasting, for example, occurs. However receptors are very limited in number. Traffic may present an increased hazard to non-motorised road users on local roads. If a bridleway continues to run alongside this site there may be future issues of trespass resulting in possible injury without mitigation.</p> <p>As an extension to an existing quarry these potential impacts are measured from a baseline where, if the site were not approved, operations would wind down and impacts would cease, so compatibility with this objective is rated as having a minor effect.</p> <p>Mitigation measures including a dust action plan, or the segregation of the bridleway from the access road would help to reduce any impacts. The existing site has already conducted a health impact assessment</p>		✓	✓	✓	-	-	0

²⁶ According to the response provided by the submitter "there have been no instances of noise, dust, visual or horse spooking reported, even along the existing bridleway 15.102/9/1, which runs within 5m of the working quarry". Lightwater Quarries, 2016. Response to NYCC Joint Minerals and Waste Plan SA Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>which should be extended to incorporate possible health effects from this site.</p> <p>Plan level / regional / wider effects None noted.</p>							
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones The site is in Flood Zone 1. About 5% of the site in areas subject to surface water flooding (low to high risk). Most of the site lies in a 1km square where <25% of the km square is susceptible to Clearwater groundwater flooding. The eastern part of the site is in a km square where groundwater flooding susceptibility information is not available.</p> <p>A nearby extension to the same quarry reports that <i>'there are no obvious points of groundwater ingress in the quarry excavations and most of the joint surfaces show little or no evidence of solution despite some karstic features in the wider local area'</i>. A borehole on this site was dry to 12.2m below ground level.</p> <p>This site is not at risk from the 1:20 (5%) flood event. CFMP: Ouse CFMP / River Washburn unit / Policy 6. Climate change would not affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test²⁷ concluded that the site would 'Pass'. The site is subject to a negligible degree of flooding and would be 'less vulnerable' in terms of the categories of development promoted by the planning system.</p> <p>A site specific flood risk assessment would need to further examine risk of groundwater flooding, any future climate change risk, and how SuDS could help manage run off.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0

²⁷ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local Effects The success of the operation is based on both Potgate (MJP10) and MJP11 (Gebdykes) quarries working together and being able to supply the concrete batching facility on site.</p> <p>Plan level / regional / wider effects The site would make a contribution to self-sufficiency in the supply of limestone and may also support markets outside of the Plan area.</p>		✓	✓		+	+	+
								?
Cumulative / Synergistic effects²⁸								
Planning context	North Stainley is 450m north-east. An outlet shopping centre is 500 m south-east. Lightwater Valley 500m south-east. Musterfield is 300m south-west. Friars Hurst at 150m north. North Stainley is a Group C settlement (only very limited growth). Although the local development framework has no allocations in place, the earlier 2001 Local Plan shows no allocations within 200m this site.							
Other Minerals and Waste Joint Plan Sites	MWJP sites within 5km: WJP24 Potgate Quarry 500m south, MJP14 Ripon Quarry 2.1km east, MJP06 Langwith Hall Farm 4.4km north, MJP07 Oaklands 4.4km north.							
Historic minerals and waste sites	Numerous historic applications clustered around Nosterfield (3.6km north), West Tanfield (2.1km north) and North Stainley (1.2km east). Fewer applications to south (2 around Sutton Grange (1.9km south). None to west. Active Magnesian limestone quarry adjacent – Potgate Quarry. Dormant sand and gravel site (Daw Wood) is 1.1km west.							
Landscape	There would be cumulative landscape character / visual effects with the existing Potgate Quarry and recently approved Musterfield extension.							

²⁸ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Impacts	
Biodiversity Impacts	In terms of biodiversity restoration, any benefit could be maximised by aligning with existing commitments and restoration at other nearby sites. With uncertainty related to how other sites are restored.
Traffic Impacts	There is the potential for cumulative traffic (and associated noise and dust) impacts that could occur with other minerals and waste sites, depending on routes taken, with uncertainty noted dependent on routes taken by this and other sites.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues. in particular with regard to avoiding impacts on Five Ponds Wood SINIC and demonstrating that minerals extraction at this site will not destroy or damage the interest features for which the Ripon Parks SSSI is designated and in respect of hedgerows and veteran or mature trees and protected species. • Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources. • Design to include landscaping to mitigate impact on the Grade I Listed Building 'Friars Hurst', Nidderdale AONB, tourism facilities and local landscape features such as historic field patterns. • Design to include site specific flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as, compensatory storage, attenuation and SuDS as appropriate. • Suitable arrangements for public rights of way, diversion or retention, and associated mitigation, as appropriate. • Traffic assessment to ensure suitable arrangements for access, including along Water Lane to the A6108 taking account of the use of the lane as a public right of way. • Appropriate arrangements for the assessment of, control of and mitigation of effects such as noise, dust, blasting and issues regarding public safety. • Appropriate restoration scheme (using opportunities for habitat creation, with well-informed justification for any wetland creation, considering also the potential adverse impacts of new wetland e.g. birdstrike safeguarding zone / referred to Defence Infrastructure Organisation (DIO)), noting that any proposal for restoration to agriculture should be tested for viability – e.g. relative to the depth of extraction. 	

WJP08 – Allerton Park, near Knaresborough

Site Name	WJP08 Allerton Park, near Knaresborough (XY 440797 459673)
Current Use	Landfill
Nature of Planning Proposal	Retention of landfill and associated landfill gas utilisation plant and use of site for growth of energy/biomass crops beyond 2018. Proposed composting, transfer station and materials recycling facility, recycling (including of minerals for secondary aggregates).
Size	29ha
Proposed life of site	Until 2033
Notes	Site currently has planning permission until 2018 for landfill. Possible restoration: no detailed design at present, but current approved scheme is agriculture and woodland. There would be built infrastructure to support the extension to the landfill operations and the recycling. The Allerton Waste Recovery Park facility adjacent to the site is currently under construction.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and	Proximity of international / national and local designations and key features Special Area of Conservation / Special Protection Area (SAC / SPA): 9km south Kirk Deighton SAC; Sites of Special Scientific Interest (SSSI): not in SSSI Impact Risk Zone (IRZ). Upper Dunsforth Carrs SSSI is 4km north-east, Hay-a-Park SSSI 4.1km south-west.	✓		✓		-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Source Protection Zone (SPZ): no, Nitrate Vulnerable Zone (NVZ): no; River Basin Management Plan (RBMP): Humber RBMP: nearest surface water body is 'River Nidd from Crimple Beck to River Ouse' (1.2km south) which is of moderate ecological potential / good by 2027 (no connectivity noted). RBMP Groundwater Unit: SUNO Sherwood Sandstone (chemical quality poor / at risk / good by 2027).</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects There are no major concerns in relation to water due to the lack of major spatial constraints. Though landfill and other waste management uses could have an impact on groundwater and surface water (e.g. via ditches in the north west part of Shepherd's Wood or through leachate passing through soil) this is expected to be dealt with through the environmental permitting system.</p> <p>Plan level/ regional/ wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by good site management and adherence to the environmental permitting system during operation.</p>					0	0	0
3. To reduce transport miles and associated emissions	<p>Proximity of transport receptors The site is adjacent to the A1(M) and A168 giving the site good access to York, Harrogate and Knaresborough. Access: existing access at Allerton Park Landfill is onto A168 approximately 3km north of Junction 47 of A1(M). Public Right of Way (PRoW): this site is affected by a registered PRoW which must be kept clear of any obstruction until such time as an alternative route has</p>		✓		✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
from transport and encourage the use of sustainable modes of transportation	<p>been provided and confirmed by order.</p> <p>Light Vehicles: 8 two-way movements (as sourced from Application details NY/2011/0328/ENV). Heavy Goods Vehicles (HGVs): 72 two-way movements (as sourced from Application details NY/2011/0328/ENV).</p> <p>Net change in daily two-way trip generations: light vehicles: 0; HGVs: 0. Traffic assessment rating: Yellow –</p> <p><i>'The HGV access routes to the site are part of a Section 106 legal agreement restricting HGVs to dedicated approach routes to minimise traffic impacts. Given that the traffic and HGV generations of the site are to remain the same, the submission is therefore unlikely to result in any additional traffic impacts although it is recommended that routing agreements are maintained as part of any planning approval to continue operation of the site to minimise traffic impacts on local communities.'</i></p> <p>Rail: nearest rail network 2.4km south / railhead 34.9km south. Strategic Road: site is adjacent to A1(M) and A168; Canal / Freight waterway: River Ouse is 6.2km north.</p> <p>Local effects 80 vehicles per day would use this site. However, this would be a continuation of existing vehicle movements from a site which currently has planning permission to operate until 2018 (though this assessment notes the extension of impacts that would otherwise have ceased into the future). This is noted within the Highways Assessment as acceptable on to the A168 County Road, though minor works may be required to improve the existing access arrangements (though the existing Allerton Waste Recovery Park (AWRP) development also requires improvements to access arrangements which may lessen the need for some further improvements to access from this site).</p> <p>Sustainable travel options seem limited though a site specific traffic assessment would be required to look at this in more detail. The site is not likely to generate significant passenger transport demand.</p> <p>There will be some positive impacts through the transfer of waste, which will presumably bulk up and sort waste for onward processing (reducing the need for longer journeys).</p> <p>Plan level / regional / wider effects There would not be a net gain in traffic as a result of the proposal,</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	therefore impacts are not expected to the wider Plan area.							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Not within Hazardous Substances consent consultation zone; Air Quality Management Areas (AQMA): None within 2km.</p> <p>Built development receptors: Coneythorpe 1.2km west, Clareton Moor 1.3km west; Arkendale Moor 1.5km north-west, Flaxby 1.5km south-west, scattered buildings to the north; occasional farm buildings with 2km, buildings associated with Allerton Park within 2km. Walls Close House 200m east.</p> <p>Local effects Potential air quality impacts include dust from construction and traffic pollutants, however due to the proximity of potential receptors significant impacts are considered unlikely, with a score on minor negative in the short and medium term. There is the potential for a long term positive effect on air quality following restoration.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	-	-	+
								?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): majority of site mapped as Grade 3, with a smaller area of Grade 2. However, much of this has been quarried / landfilled. Most of the site in former quarry - contamination risk may need further investigation. Subsidence: Site does not lie within or adjacent to a development high risk area.</p> <p>Local effects Much of this site has already been quarried (though a soil stockpile was observed during the site visit. Impacts will be insignificant. The proposals for this site to manage waste in a variety of ways are likely to have positive and negative effects on this objective.</p> <p>Composting, recycling waste and recovering energy / biomass crops would help to maximise the use the</p>	✓	✓	✓		+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>land efficiently and is considered a positive effect.</p> <p>However, other forms of waste management may result in some contamination of soils depending upon the type of processing due to leachate and/or spillage. Landfill has implications on land take and potentially extending the existing facility over the course of the Plan period. There is the potential therefore for this type of waste management to cause contamination from the waste products, run-off and leachate. It is assumed that permission and protocols already in place for this would be renewed and continued as part of the waste management proposal so many of these impacts would be abated.</p> <p>On balance, the use of this site has been assessed to have a positive impact associated with this option and a degree of uncertainty associated with the scoring.</p> <p>Plan level / regional / wider effects Same as local effects, if restored to agriculture and forestry has the potential to contribute positively to soil in the wider Plan area.</p>					?	?	?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change No spatial factors identified.</p> <p>Local effects As climate change is a global issue effects are reported in the wider effects below.</p> <p>Plan level / regional / wider effects Proposal for this site to continue its use as a waste management facility may have mixed effects on climate change. Whilst the outcomes of the waste management processing such as recycling and composting could have positive implications on climate change through the re-use of resources in the long-term. On balance impacts are considered minor positive on the SA Objective.</p>	✓		✓	✓	+	+	+
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity²⁹ of a site Site is in Flood Zone 1; About 5% - 10% of the site is subject to low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) surface water flooding.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of</p>					0	0	0

²⁹ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>time. At low flows new extraction licenses may be more restricted.</p> <p>ALC Grade 3 and 2. However, much of this has been quarried / landfilled.</p> <p>Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period.</p> <p>Local effects Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively. A changed site profile will have affected where water gathers. Although there is a future opportunity to strengthen an ecological network through the proposed site restoration.</p> <p>Plan level / regional / wider effects None noted.</p>							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site The existing landfill gas utilisation plant and use of site for growth of energy/biomass crops.</p> <p>Local effects The proposal for this site to continue and expand its management of waste higher up the waste hierarchy is likely to have positive implications for resources. Recycling (including mineral for secondary aggregates) and composting waste is positive for minimising and re-using resources. In addition, growth of energy/biomass crops and landfill gas utilisation as part of this proposal would contribute to minimising the use of primary resources.</p> <p>The significance of these effects would rely upon the quantum of waste used in these processes but should overall have a positive impact.</p> <p>Plan level / regional / wider effects See local effects above.</p>	✓		✓	✓	m +	m +	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> The existing landfill gas utilisation plant and use of site for growth of energy/biomass crops.</p> <p><u>Local effects</u> The proposal for this site will manage waste at all stages of the waste hierarchy. Whether it is as high up as is practicable is dependent on the wastes accepted at the landfill site. There would be a continuation of associated landfill gas utilisation plant and use of site for growth of energy/biomass crops beyond 2018. Whilst the function of the existing landfill would still occur, co-locating other waste management processes together and expanding the type of processing to occur would help to ensure that landfill is minimised.</p> <p>The significance of these effects would rely upon the quantum of waste used in these processes but should overall have a minor to major positive impact.</p> <p><u>Plan level / regional / wider effects</u> The waste management processes on the site would have a positive effect on waste management and the waste hierarchy in the Plan area.</p>	✓		✓		m +	m +	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation Areas: None within 1km; Registered Parks and Gardens: overlap with Allerton Park to the south. Registered battlefields: None within 5km; World Heritage Sites: None within 5km; Scheduled Monuments: None within 2km; Listed buildings: 3 within 1km (all to south of site) associated with Allerton Park Estate; Non-designated historic parks and gardens: Allerton Park overlaps south-east corner; Named designated landscapes: Designed Landscape (Allerton Park) borders south and east of site (associated with Capability Brown).</p> <p>Historic Landscape Characterisation (HLC) Broad type – Extractive; HLC Type – Quarry aggregates. The HLC type of this area is quarry aggregates, with an invisible legibility. The site is therefore assumed to have no overall impact HLC.</p> <p><u>Local effects</u> Undesignated archaeology in this area includes evidence for a wider landscape of later prehistoric and Romano-British activity and settlement. This evidence is known from a combination of previous archaeological survey and fieldwork undertaken in advance of and during mineral extraction within this area. However, it is anticipated that there will be no impact upon the archaeological resource as the</p>		✓	✓		-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>proposed development is within an area of former quarry, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed.</p> <p>There may however, be impacts to the setting and extent of registered parkland and impacts on the setting of the Grade II* Temple of Victory and the Grade I listed castle. Archaeological remains have been lost from the quarry previously³⁰. As the neighbouring AWRP development predicted a large adverse effect on Allerton Park and Gardens as well as the nearby listed buildings, as well as minor adverse effects on more distant receptors prior to mitigation it is considered that this site too would have an impact prior to mitigation, albeit a smaller one, depending on the scale of the proposals. Restoration would have no impact.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks / Area of Outstanding Natural Beauty (AONBs) / Heritage Coast: none within 10km; ITE: Upper Dunsforth ITE lies 4.2km north-east.</p> <p>National Character Area (NCA): Southern Magnesian Limestone; North Yorkshire Landscape Character Assessment (LCA): 06 - Magnesian Limestone Ridge: Moderate to high visual sensitivity (views to and from the Magnesian limestone ridge are sensitive to the introduction of tall vertical elements or large-scale development); High ecological sensitivity (as a result of the presence habitats sensitive to changes in land management). High landscape and cultural sensitivity (as a result of the nationally significant Neolithic and Bronze Age monuments, in addition to the predominantly intact landscape pattern). District LCA: Site encompasses 3 character types in Harrogate LCA.</p>	✓		✓		-	-	-

³⁰ Amey Cespa, 2011, Allerton Waste Recovery Park Environmental Statement Non-Technical Summary

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>District landscape designations: Not within 5km; Green belt: No.</p> <p>Intrusion: Disturbed – due to the A1(M) corridor, and because the site is within a mineral extraction site; Light pollution: the site ranges from 0.5 to 4NanoWatts/ cm²/ sr³¹. However, construction work is underway on the AWRP which will include lighting.</p> <p>Local effects This site could affect views from Allerton Park, which is on the Register of Parks and Gardens. However, the proposed developments are unlikely to affect views from settlements.</p> <p>As well as the setting of Allerton Park there could be effects on the setting of the wider landscape undergoing restoration and enhancement (apart from the AWRP site itself). The restoration of Allerton Park Quarry to the north has been largely completed, whilst there is a restoration scheme for Allerton Quarry Landfill site which involves filling up to at least original ground levels (to a domed landform) to tie in with the Allerton Park parkland and with the adjoining countryside. There is an approved landscape scheme for the AWRP site (which overlaps with the current WJP08 submission boundary) and there is a substantial Landscape Management and Enhancement Zone Section 106 fund covering a number of character areas around the AWRP site too. It is not clear where the proposed waste developments might be located within the site but it is important that restoration is not impeded. However there will be at least a minor residual adverse impact due to the loss of part of the nationally designated parkland. (NB this differs from the historic environment assessment which puts the impact at neutral following restoration.)</p> <p>The scale of the proposals needs to be clarified. A lot of effort has been put into landscape enhancement to compensate for the adverse impact of the AWRP development within the countryside and adjacent to a registered park. This submission is likely to be a detractor in terms of landscape and visual impact, which in combination with similar development nearby would have negative cumulative effects without mitigation.</p> <p>Plan level / regional / wider effects None noted.</p>							

³¹ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Allerton Park has employees working on site as part of the existing waste management facilities.</p> <p>Local effects Widening the scope of waste management facilities is likely to require the creation of a limited amount of further jobs and also contribute to energy security (through landfill gas / biomass crops). The management of more waste higher up the waste hierarchy through recycling and re-use should also have benefits in reducing the amount of waste to be landfilled. Similarly, where waste can be used to generate energy there will be a reduction of waste to landfill. These processes in-combination would help to reduce the amount payable for landfill tax which would have economic benefits. The relationship with the adjacent AWRP facility is unclear, so uncertainty is added.</p> <p>Plan level / regional / wider effects Recycling minerals from secondary aggregates may also become income generating. Overall, it is considered that this is likely to have minor positive effects with the potential for significant economic effects subject to the implementation of the uses proposed.</p>		✓	✓	✓	m +	m +	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Coneythorpe 1.2km west, Claretton Moor 1.3km west; Arkendale Moor 1.5km north-west, Flaxby 1.5km south-west. Index of Multiple Deprivation (IMD): Eastern part in IMD area Ribston, western part in IMD Area Claro.</p> <p>Local effects Job opportunities will be created but are likely to be limited as a result of the proposed use, particularly given that it is an operational waste management facility. The proposal for waste management is unlikely to benefit the immediate settlements in any significant way. Possible impacts on the setting of Allerton Castle may affect tourism and thus tourist jobs in the local area, however these are likely to be minor.</p> <p>Overall a neutral effect is expected to the SA objective.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
14. To provide opportunities	<p>Proximity to recreation, leisure and learning receptors PRow: Bridleway 15.2/5/1 appears to overlap north east site boundary slightly. Further bridleways lie 300m east, 30m north; 120m west. Common land /</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
to enable recreation, leisure and learning	<p>Village Greens: No</p> <p>Local effects There is a potential issue with a bridleway, as submission area includes the track to Walls Close properties, which is a bridleway. However, it is expected that this would be accommodated as this bridleway was created as part of the landscaping for the original sand and gravel development. Impacts on Allerton Castle and Parkland may diminish recreational opportunities locally if unmitigated.</p> <p>Plan level / regional / wider effects None noted.</p>							
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Built development receptors: Coneythorpe 1.2km west, Clareton Moor 1.3km west; Arkendale Moor 1.5km north-west, Flaxby 1.5km south-west, scattered buildings to the north; occasional farm buildings with 2km, buildings associated with Allerton Park within 2km. Walls Close House 200m east; No schools or hospitals within 1km. No on-site National Grid infrastructure (e.g. pipelines).</p> <p>Local effects Noise is unlikely to be significant due to proximity to the A1(M), while dust, odour and bio-aerosol impacts would at worst, under certain conditions affect buildings in the area. Though the effect is likely to be insignificant given the distances to receptors³².</p> <p>On balance, it is predicted that the proposals on this site may have a minor negative effect over the course of the Plan period.</p> <p>Plan level / regional / wider effects None noted. It is expected that the potential impacts identified above would be local in nature.</p>		✓	✓	✓	-	-	0

³² The Environment Agency have used a minimum 50 m standoff distance for domestic properties for sludge spreading to land (see: Defra, 2010. Odour Guidance for Local Authorities [https://www.gov.uk/government/uploads/system/uploads/attachment_data/file/69305/pb13554-local-auth-guidance-100326.pdf]). Elsewhere guidance recognises that distance is a key factor in reducing odour risk though does not give guidance on distance thresholds, rather suggesting the use of odour plume modelling in relation to sensitive receptors (see Institute of Air Quality Management, 2014. Guidance on the assessment of odour for planning [URL: cambridge.gov.uk/sites/www.cambridge.gov.uk/files/documents/cnfe-aap-io-iaqm-odour-assessment-guidance.pdf] - URL is no longer available).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is in Flood Zone 1; Surface water flooding: about 5% to 10% of the site is subject to low risk (1:1000 (0.1%)) to high risk (1:30 (3.33%)) surface water flooding.</p> <p>Most of this site is in two 1km squares which the Environment Agency's Areas Susceptible to Groundwater Flooding indicates have a <25% vulnerability to Clearwater flooding. The remainder of the site (along the eastern boundary) is not mapped.</p> <p>A flood risk assessment for construction of lagoons on part of the site did not consider groundwater but considered the site would not be at risk of flooding³³. Earlier proposals for the extension of sand and gravel extraction at the site found 'hydraulic continuity between the Sherwood Sandstone Aquifer and sand and gravel though concluded that due to the size of the site impacts would be small³⁴. However, as this development is unlikely to extend the depths of any features risks are considered to be low, but should still be investigated.</p> <p>This site is not at risk from the 1:20 (5%) flood event.</p> <p>Local effects SFRA Sequential Test undertaken for the site concluded that this site would 'Pass'. A site specific flood risk assessment would need to further examine risk of groundwater flooding and how SuDS could be used to sustainably manage surface water runoff.</p> <p>Plan level / regional / wider effects None noted.</p>					-	-	-
						?	?	?

³³ Hydrologic, 2009. Pro Forma for Undertaking a Flood Risk Assessment [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=5994>].

³⁴ Hanson Aggregates –North. 1999. The extension of sand and gravel extraction and retention of existing and retention of existing quarry facilities at Allerton Park, Knaresborough, North Yorkshire – Environmental Impact Assessment Non-Technical Summary [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=3992>]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population</u> No spatial factors identified.</p> <p><u>Local effects</u> Allerton Park would enable more waste to be processed in a sustainable way as it is promoting recycling and reuse of waste and as well as energy/biomass crops generation using waste products. This responds well to the overall need and requirement of the population to process waste more efficiently and effectively in a direct way. Site appears to have some overlap with AWRP, but largely skirts around its perimeter.</p> <p>Overall, the site would support effective waste management and energy security.</p> <p><u>Plan level / regional / wider effects</u> As local effects above.</p>		✓	✓	✓	+	+	+

Cumulative / Synergistic effects ³⁵	
Planning context	Coneythorpe 1.2km west, Clareton Moor 1.3km west; Arkendale Moor 1.5km north-west, Flaxby 1.5km south-west all lie within 2km. None of these sites are listed in Harrogate's settlement hierarchy so development levels would be expected to be low and in line with Harrogate's Policy SG3 'Settlement Growth: Conservation of the Countryside, Including Green Belt' which focuses on affordable homes, rural building conversions, small scale community facilities and sustainable rural enterprises.
Other Minerals and Waste Joint Plan Sites	None within 5km.
Historic minerals and	The site lies next to Allerton Waste Recovery Park. There are also several historic applications associated with minerals extraction and landfill. Claro (minerals extraction) was granted in the 1950s, and lies about 60m west. 450m to the south-west there is another group of historic quarrying and landfill applications around Flaxby Quarry/ Allerton Grange Farm. Borrow pits associated with the A59 were granted in

³⁵ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

waste sites	the 1950s about 1km south. About 1.5km south east lie a cluster of applications associated with Hopperton Quarry and related A59 Borrow Pits.
Landscape Impacts	The submission is likely to be a detractor in terms of landscape and visual impact, which in combination with similar development nearby would have negative cumulative effects without mitigation.

Limitations / data gaps

No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on Allerton Park Lakes SINC and protected species.
- Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resource.
- Design of development and landscaping of site to mitigate impact on heritage assets (Allerton Park Registered Park and Garden, Coneythorpe Conservation Area and Listed Buildings including Allerton Park Mansion, Church of St Mary and the Temple of Victory) and local landscape features and their respective settings, Allerton Waste Recovery facility and right of way.
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate.
- Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate).
- Design to include suitable arrangements for access to local roads including the A168, including a traffic management plan.
- Appropriate arrangements for control of and mitigation of the effects of noise and dust.
- Appropriate restoration scheme using opportunities for habitat creation.

WJP24 Potgate (former plant site), North Stainley, Recycling

Site Name	WJP24 Potgate (former plant site), North Stainley, Recycling (XY 427775 475637)
Current Use	Redundant crushing and screening plant.
Nature of Planning Proposal	Recycling of inert construction and demolition waste for secondary aggregates.
Size	0.75ha.
Proposed life of site	Tied to Potgate Quarry permission which is 1 June 2022 (if MJP10 is not developed).
Notes	The intention would be to operate the recycling to extend the life of Potgate Quarry. Restoration to be incorporated into Potgate Quarry restoration scheme.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000: North Pennine Moors Special Area of Conservation (SAC) / Special Protected Area (SPA) is 8.2km west; Site of Special Scientific Interest (SSSI): 3 SSSIs within 5km. Nearest is Cow Myers SSSI at 2.5km south. Ripon Parks is 2.4km east. Hack Fall Wood is 3.8km west. SSSI Impact Risk Zone (IRZ): The site is in the outer area of SSSI IRZ for Ripon Parks SSSI (no data available).</p> <p>Site of Importance to Nature Conservation (SINC): SE27 -19 (Coal Bank Wood - Ratified) is 1.9km west, while SE27-24 (Ellington Banks) is 1.7km south. UK Priority Habitat: Deciduous woodland is 800m west, 750m east, 350m north and 600m south.</p> <p>Local effects There are unlikely to be any effects on Natura 2000 or SSSI sites from this site. Although there are no priority habitats on site, great crested newt are known from surveys carried out in 2012 to be present within Potgate Quarry. The proposal site itself (based on aerial photos) comprises the base of a worked quarry (rock), so biodiversity interest will be minimal, though dust might drift onto adjacent plantation</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>woodland while noise may also have an impact below the level of significance. Not significant.</p> <p>Plan level / regional / wider effects There are unlikely to be any effects on Natura 2000 or SSSI sites from this site in the wider area.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Nitrate Vulnerable Zone (NVZ): the site is in a groundwater NVZ and surface water NVZ. Source Protection Zone (SPZ): there are none on site or adjacent; River Basin Management Plan (RBMP): Humber RBMD – the site is in ‘Ure from Thornton Steward Beck to River Skell’ waterbody catchment (overall moderate quality / objective: good by 2027). Groundwater objective 'good by 2015'.</p> <p>Catchment Abstraction Management Strategy (CAMS): Surface water resource available at least 50% of the time (Q95=red).</p> <p>Local effects While there may be a risk from fuel spills and possible leachate there are no major receptors to which there is clear connectivity (nonetheless such incidents could contaminate groundwater and other minor water bodies). This is expected to be controlled by good site management.</p> <p>Plan level / regional / wider effects None noted.</p>				0	0	0	
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of	<p>Proximity of transport receptors The site is 7.7km from Junction 50 on the A1(M). Access: existing Potgate Quarry access is via Water Lane (bridleway) onto A6108 approximately 100m south of North Stanley village. Heavy Goods Vehicles (HGVs): 5; Light Vehicles: None.</p> <p>Net change in daily two-way trip generations: Light vehicles: none; HGVs: five additional two-way movements.</p> <p>Public Right of Way (PRoW): Site access will lead onto a bridleway.</p> <p>Rail: None within 5km.</p> <p>Local effects Traffic modelling in the traffic assessment predicts that HGV numbers are low and as other</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
transportation	<p>quarries use this road all HGVs are required to turn right to the junction with the A6108. Traffic impacts are not, therefore, significant. However, there is a possible very minor conflict with bridleway users which may need some additional consideration at the planning application stage.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							
4. To protect and improve air quality	<p><u>Proximity of air quality receptors</u> Site is not within a Hazardous Substance Consent Site or an Air Quality Management Area (AQMA).</p> <p><u>Local effects</u> Dust from site could affect Potgate Farm (circa 40m south-west), New Zealand Farm (590m south-west), though prevailing winds are westerly. Other receptors are more distant or screened by trees or intervening topography.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓		-	-	0
5. To use soil and land efficiently and safeguard or enhance their quality	<p><u>Proximity of soil and land receptors</u> Agricultural Land Classification (ALC): Grade 3; Contaminated land: Site is on quarry floor so land contamination is unlikely. Gypsum dissolution area: Site not in a gypsum dissolution area. Site does not lie within or adjacent to a Coal Authority development high risk area. Site is listed in Abandoned Mines Catalogue (NE969 and NE970).</p> <p><u>Local effects</u> Although on ALC Grade 3 land, this site already is a former quarry (so brownfield), there is an approved restoration scheme for the quarry.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change No high carbon habitats on site.</p> <p>Local effects See wider effects below.</p> <p>Plan level / regional / wider effects. This site involves low number of vehicles, and while reasonably accessible to the A1(M), it would generate a small, though not significant, amount of carbon over time. The site would also recycle inert construction and demolition waste, which is expected to be positive for climate change as ultimately it will reduce the embodied energy of construction materials. On balance, minor positive.</p>	✓	✓		✓	+	+	0
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity³⁶ of a site Site is in Flood Zone 1. About 5% of this is site in areas subject to surface water flooding (low to high risk). No ecological networks affect the site. CAMS: Surface water resource available at least 50% of the time (Q95=red).</p> <p>Local effects Climate change would not affect the site in the latter part of the Plan period. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Plan level / regional / wider effects. None noted.</p>					0	0	0
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will recycle construction and demolition waste and handle secondary aggregate which will ultimately reduce resource usage. If higher value products are simply used in quarry restoration however this effect will be lessened.</p> <p>Plan level / regional / wider effects None noted.</p>	✓			✓	m+	m+	0

³⁶ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> This site will recycle construction and demolition waste and handle secondary aggregate which will reduce waste.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓		✓		m +	m +	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation Areas: None within 1km; Registered Parks and Gardens: None within 2km - Hack Fall (Grade I) is 3.8km north-west, Norton Conyers (Grade II) is 3.3km east; Studley Royal (Grade I) is 3.7km south; Registered Battlefields: None within 5km; World Heritage sites: Studley Royal Park including the ruins of Fountains Abbey is 5.2km south (not within buffer zone); Scheduled Monuments: one within 2km – Castle Dikes defended Roman Villa; Listed buildings: None within 1km.</p> <p>Named Designed Landscapes (within 2km): Unnamed designed landscape 1.4km north-west, unnamed designed landscape 1.5km north, North Stainley Hall 930m north-east, Azerley Chase 1.7km south-west. Former Azerley Park 1.9km south-west.</p> <p>HLC Broad type – Settlement; HLC Type – Farm complex. The proposed materials recycling facility lies within an area of existing development as a pig farm. Within the surrounding area, the undesignated archaeological interest includes areas of prehistoric settlement and activity. Archaeological recording has been undertaken in response to previous extensions to Potgate Quarry and this has recovered archaeological evidence.</p> <p><u>Local effects</u> The HLC type of this area is farm complex. The allocation site is the entirety of this character type. It is assumed that within the allocation site the HLC has already become invisible as the development</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>has replaced an earlier field system. Accordingly, the use of the site for the proposed purposes is assumed to have no overall impact on HLC.</p> <p>Although there would be the potential for irreversible loss of archaeology in this area, the site is on the quarry floor so this effect would not occur. The site is also not likely to affect the setting of any historic features significantly.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Park: Yorkshire Dales is 19.3km west; Area of Outstanding Natural Beauty (AONB): Nidderdale is 530m west; ITE: None within 2km; District Level Landscape Designation: None within 2km.</p> <p>National Character Area (NCA): 30 - Southern Magnesian Limestone; North Yorkshire and York Landscape Character Assessment (LCA): 06 - Magnesian Limestone Ridge (moderate to high visual sensitivity, high ecological sensitivity and high landscape and cultural sensitivity); District LCA: 77 - North Ripon Farmland in Harrogate LCA; Green Belt: No.</p> <p>Urban Intrusion: The site is in an area classed as disturbed and the existing quarry and the Lightwater Valley theme park/shopping attraction lie to the south and detract from the experience of tranquillity. Light pollution: the site ranges from 0.5 to 1NanoWatts/ cm²/ sr³⁷.</p> <p>Local effects The site is close to the Nidderdale AONB and views and potential noise disturbance would need to be assessed. The area to the west, between the site and the AONB boundary which currently has planning permission for mineral extraction will not in fact be quarried due to the quality or quantity of the mineral, and will remain in agricultural use.</p> <p>The site is brownfield land on the quarry floor so it could be accommodated as a temporary use. However</p>		✓	✓		-	-	?

³⁷ Light pollution and dark skies are measured on a scale <0.25 (darkest) to >32(brightest) NanoWatts/ cm²/ sr. CPRE, 2015; England's Light Pollution and Dark Skies – Interactive Map. Available at <http://www.cpre.org.uk/>. Accessed September 2016.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>there is an approved low level restoration scheme for Potgate Quarry which is being implemented in phases. The proposed new use will be a mixture of nature conservation and grazing, with some public access in the long term. Secondary aggregates recycling would be visually intrusive and out of place in the restored landscape.</p> <p>The site is relatively low in the landscape (being on the quarry floor) and generally screened by topography and vegetation in views from local roads (although this would need to be checked). However, viewpoints in the area tend to be higher than this site, so the site may be visible from some locations. There would also be views from the diverted right of way which follows the northern boundary of Potgate Quarry.</p> <p>Plan level / regional / wider effects The site may have visual impacts on the AONB (see above).</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The site is 7.7km from Junction 50 on the A1(M) and 4.8 miles north of Ripon, so has reasonable access to key markets (and is quite close to Ripon).</p> <p>Local effects Recycling construction and demolition waste will add value to what would otherwise have been a waste product (and will save landfill tax). However, if this waste is simply used in quarry restoration the effect will be considerably lessened, though may save bringing in virgin material for restoration.</p> <p>Plan level / regional / wider effects See local effects above.</p>	✓		✓		m +	m +	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Indices of Multiple Deprivation (IMD) area is Kirkby Malzeard, not in the most deprived 20%; Nearest settlement is North Stainley (1.5km north-east), Ripon is 4.8 miles south.</p> <p>Local effects Traffic is at a low level so unlikely to significantly affect community vitality, and jobs are likely to be minimal. No significant effect.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors PRoW: Bridleway 15.102/9/1 lies 280m north. Bridleway 15.102/10/2 runs 120m south. Common Land: None within 500m; Registered Village Greens: None within 500m.</p> <p>Local effects There is a possible minor conflict with bridleway users from low levels of traffic. This effect would be cumulative with MJP10, though this site's contribution would be minimal.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	0
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No on-site National Grid infrastructure (e.g. pipelines). No schools or hospitals within 1km (nearest school 1.7km north-east). Lightwater Valley is 550m east.</p> <p>Local effects Dust and noise from site could affect Potgate and New Zealand Farms and possibly Musterfield, though all are to the west of the site (against prevailing winds), and all apart from Potgate Farm are reasonably distant (i.e. over 500m) so effects would be low level. Other receptors are more distant or screened by trees or intervening topography. The very small cumulative effect of traffic with MJP10 would have a negligible effect on health.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	0
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is in Flood Zone 1. About 5% of this is site in areas subject to surface water flooding (low to high risk).</p> <p>Most of the site lies in a 1km square where <25% of the km square is susceptible to Clearwater groundwater flooding. The eastern part of the site is in a km square where groundwater flooding susceptibility information is not available.</p> <p>A nearby extension to the same quarry reports that "there are no obvious points of groundwater ingress in</p>		✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>the quarry excavations and most of the joint surfaces show little or no evidence of solution despite some karstic features in the wider local area³⁸. A borehole on this site was dry to 12.19m below ground level so much depends on the depth of extraction.</p> <p>This site is not at risk from the 1:20 (5%) flood event.</p> <p>Local effects SFRA Sequential Test undertaken for the site concluded that this site would 'Pass'. A site specific flood risk assessment would need to further examine risk of groundwater flooding.</p> <p>Plan level / regional / wider effects None noted.</p>							
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site could make a contribution to the supply of aggregates and other building product for the Plan area and beyond (if it is concerned with construction / demolition waste recycling) which may support the housing and employment markets. However, much depends on whether and how much of the recycled waste / secondary aggregate is used in quarry restoration.</p> <p>Plan level / regional / wider effects As local effects above.</p>		✓		✓	+	+	0
Cumulative / Synergistic effects³⁹								
Planning context	North Stainley is 1.5km north east. North Stainley is a Group C settlement in Harrogate. These settlements will accommodate only very limited growth mainly in the form of sustainable development within their existing built up areas. Although Harrogate has not yet developed new development sites, the 2001 Local Plan shows a North Stainley to be largely confined to its settlement boundaries.							

³⁸ Lightwater Quarries. 2012. Potgate Quarry: Planning Application for an extension to the existing mineral workings with restoration to nature conservation habitats: Environmental Statement prepared by David L Walker Ltd [URL <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=8602>]

³⁹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Other Minerals and Waste Joint Plan Sites	MWJP sites within 5km: MJP10 Potgate Quarry is 600m north, MJP14 Ripon Quarry is 2.6km east.
Historic minerals and waste sites	Further extraction around Potgate quarry has taken place historically. Sutton Grange mineral extraction site was granted during the 1940s and lies 1.3km south. Ripon Quarry (granted in the 2000s) and still active lies 1.3km northeast.
Traffic Impacts	There are possible cumulative effects on transport and air quality with other sites, but this site's contribution would be very low
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on protected species. • Design to include landscaping to mitigate impact on local landscape features, local residents and users of rights of way • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate • Design to include suitable arrangements for public rights of way (diversion or retention, and associated mitigation, as appropriate) including along Water Lane. • Design to include suitable arrangements for access and local roads • Appropriate arrangements for control of and mitigation of the effects of noise, dust, etc. • Appropriate restoration scheme integrating with existing Potgate quarry scheme and using opportunities for habitat creation. 	

MJP05 – Lawrence House Farm – Scotton

Site Name	Site MJP05 (Lawrence House Farm, Scotton, Harrogate)
Current Use	Current Use: Agriculture
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 23.35 ha
Proposed life of site	Proposed life of site: Commence within 5 years, with a 15 year life
Notes	Notes: Possible restoration unknown at present. Proposed new quarry.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Assumptions: the lifetime of the site is currently unknown however for the purposes of this assessment, it has been assumed that the site will be operational in the short and medium term and has been restored in the long term.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features SAC/SPA: 14km West North Pennine Moors SPA/SAC; SSSI: Farnham Mires SSSI lies 450m from site; SINC: 0.6km from Farmire SINC (SE36-08) deleted SINC, 1km from Decoy Fields, Lingerfield (SE35-04), 1.22km from Driffield's Plantation (potential SINC - does not qualify), 2km from Farnham Lane Verge SINC, 1.28km from Nidd Gorge Woodlands SINC.</p> <p>Priority Habitat: None within 200m; Ancient Woodland: Circa 780m to nearest ancient woodland.</p> <p>Eco networks: Site is not adjacent to any England Habitat Network sites. Site does not lie within a living landscape however River Ure Corridor lies circa 200m east. Green Infrastructure (GI): 158m from nearest GI corridor (District level GI corridor - Tutt and Bishop Monkton).</p> <p>Site visit: 'Dovecote Carr' woodland within site. Hedgerows between north-west & north-east fields +</p>	✓	✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>between south-west & south-east fields. Standalone trees, in hedge between south-west & south-east fields.</p> <p>Local Effects Protected species on/adjacent to site could include: badger, great crested newt, foraging bats, nesting birds, farmland birds and possibly water vole along the beck. Important habitats on site could include mature trees and species rich hedgerows. Due to close proximity of the SSSI and SINC there is an opportunity to create priority habitats through restoration and long term management that could improve habitat connectivity. Restoration issues will be affected by the limit of extraction, depth of extraction & the landform proposed including the features of any water bodies (depth, shape, size, etc.). Potential beneficial restoration could also link with the nearby Yorkshire Wildlife Trust Staveley Nature Reserve if designed for shallow water/mire areas, provided that does not negatively impact the SSSI.</p> <p>If biodiversity led restoration is pursued (uncertain) there could be a cumulative positive effect – for instance, the River Tutt restoration scheme nearby would link well with shallow wetland areas if created on site.</p> <p>Plan level / regional / wider effects Considering source - pathway - receptor for this site it is considered that there would be no significant effect on any Natura 2000 site. There is a surface water connection to the Farnham Mires SSSI via Percy Beck and Jumwell Beck. This could increase impacts from pollutants and invasive species, while dust might also have an impact on marsh and calcareous grassland habitats.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Groundwater links between the sites need investigating as the SSSI is designated in part for its spring fed marsh habitats which are sensitive to changes in ground and surface water. Dovecote Carr may also be affected, but the value of its interest is unknown, e.g. potential for newts. Sand and gravel extraction has the potential to impact upon groundwater levels and quality, especially if reserves are worked below the water table. Proximity of transport route to SSSI and associated impacts (noise, dust, pollutant run off from highway) need investigating as they could have a potentially negative impact.</p> <p>To summarise, in the short term changes in ground and surface water (some permanent), along with impacts from dust deposition and transport may have significant impact upon habitats within the SSSI. In the medium to long term opportunities to enhance biodiversity in the area through habitat creation linked to SSSI objectives should be a priority here. Long term management would be required.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site does not lie within a Nitrate Vulnerable Zone or a Groundwater Source Protection Zone; In Humber RBMP. Nearest section of river is 'River Tutt Catchment (Tributary of Ure)' (current ecological quality- poor potential, current chemical quality- does not require assessment) at 80m north-east of site. Target: Good by 2027. NO RBMP lakes. Groundwater: site lies in SUNO Millstone Grit and Carboniferous Limestone (current quantitative quality- good, current chemical quality- poor). Target: Good by 2027.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local Effects There is a possibility that there could be pollutant impacts that occur through fuel / chemical spills or run off of overburden when it is moved at this site. There may also be impacts on groundwater or surface water flow and there are concerns that the quarry may need to divert the on-site Percy Beck, a short length of which crosses the southern part of the site. Impacts are likely to be relatively easy to mitigate, (and most would be dealt with via an environmental permit) as there are no major constraints, though the 'River Tutt Catchment (Tributary of Ure)' water body may, if pollution episodes do occur repeatedly, be less likely to achieve its status objective.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	?
3. To reduce transport miles and	<p>Proximity of transport receptors The A1(M) lies around 7.2km east of the site and proximity to market, particularly York, Leeds and Harrogate is good. Access: Confirmed as being onto High Moor Lane (U2792 unclassified road) approximately 610m north of B6165 junction; then towards A61: either</p>		✓		✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
associated emissions from transport and encourage the use of sustainable modes of transportation	<p>northwards on High Moor Lane and Brearton Lane U2790, or south on High Moor Land and onto B6165 and then westwards.</p> <p>HGV Vehicles: 72 two-way daily movements; Light Vehicles: 10 two-way daily movements.</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 3.3km south / Railhead: 34.3km south; Strategic Road: A61 is 2.6km west / A1(M) is 7.2km east Canal / Freight waterway: 42km south</p> <p>Local effects The site would generate 82 vehicle movements per day which may to a limited degree cause minor delays as lorries turn on to B6165. However, traffic from this site might also join traffic from local business parks at Scotton and Lingerfield. Works will be required to improve the existing minor road network leading to the A61 and extend existing footway / street lighting to improve safety along the agreed haul route. The site has no direct connection/frontage to a highway maintainable at the public expense</p> <p>A transport assessment and travel plan would be required and this should help determine if travel modes beyond the highway network can be used. Depending on this assessment this site may require additional facilities / service provision to address passenger transport issues.</p> <p>The Highways Assessment noted that the minor road network, especially near Brearton, is not suitable for HGV traffic and would need improvement if possible.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
4. To protect and improve	<p>Proximity of air quality receptors No AQMAs within 2km (Knaresborough AQMA 3km south-east. The site does not lie within a Hazardous substances consultation zone. A number of settlements and individual properties lie within 1km of the site: Scotton (nearest properties 150m south), Brearton 550m</p>		✓	✓	✓	-	-	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
air quality	<p>north, Lingerfield 900m south-east. Individual properties- Lawrence House Farm 40m south, several properties 190m south. A school lies to the south east of the site (200m).</p> <p>Local effects The site lies in close proximity to a number of residential receptors and a school which may experience air quality impacts in relation to dust from the site and, to the east of the site, from traffic. Should wet-working take place at the site dust impacts would be less likely, aside from during initial soil stripping and during restoration. Although an AQMA lies circa 3km from the site in Knarborough, it is understood (and assumed in this assessment) that site traffic will not travel through Knarborough. Possible minor negative impacts are predicted during site construction, operation and restoration, with uncertainty noted depending on whether the site would be wet worked. Long term impacts are uncertain as site restoration plans are currently unknown. Mitigation such as wheel washing and damping down in dry weather may be appropriate.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC: Grade 3. Contaminated land: Greenfield site / not applicable.</p> <p>Local effects Up to 23.35 ha of possible best and most versatile land (although it is not clear whether the site is 3a or 3b) could be lost. Some of this may be restored (although this is uncertain at present).</p> <p>Plan level / regional / wider effects Same as local effects.</p>	✓		✓		m-	m-	m-
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change No priority habitat identified onsite or adjacent. Site visit noted 'Dovecote Carr' woodland within site. Hedgerows between north-west & north-east fields and between south-west & south-east fields. Standalone trees, in hedge between south-west & south-east fields.</p> <p>Local effects Small areas of woodland, hedgerows and trees may be lost as a result of the development however this is not considered to constitute a significant loss of carbon storage potential</p> <p>Plan level / regional / wider effects This site would produce 200,000 tonnes of sand and gravel to be transported from site per year, which could generate a modest amount of CO₂. The A61 lies 2.65km west and the A1(M) lies 7.2km east and access to market, particularly York, Leeds and Harrogate is fairly good. It is therefore considered that the location of the site would not constitute a significant additional source of carbon (although it does lie further from the A1(M) than a number of other sand and gravel sites). Overall, impacts are considered to be up to moderate negative as a result of cumulative additions of CO₂ to the atmosphere.</p>	✓			✓	-	m-	m-
7. To respond and adapt to the effects of	<p>Proximity of factors relevant to the adaptive capacity⁴⁰ of a site Majority of site in Flood Zone 1. Very small area along northern boundary in Flood Zone 2 and Flood Zone 3 (0.5% in each). Around 5% of site is at high risk of surface water flooding (1 in 30), further 2 % at medium risk (1 in 100) and a</p>		✓	✓		0	0	+

⁴⁰ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
climate change	<p>further 5% at low risk (1 in 1000). No ecological networks identified onsite or adjacent. CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The site is not particularly prone to flooding and sand and gravel extraction is classed as water compatible. The site is considered unlikely to impair the movement of species vulnerable to climate changes. In the longer term restoration to nature conservation could provide an opportunity to deliver climate change adaptation (e.g. habitat refuge) or restoration to water may be beneficial in terms of reducing flood risk elsewhere in the catchment. These impacts are uncertain however as restoration plans are unknown.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change.</p>					-	-	?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that up to 2.9 million tonnes of virgin minerals would be extracted over the lifetime of the site which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue during the operational lifetime of the site.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		-	m-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations, but this is considered to be of low / negligible significance.</p>					0	0	0
10. To conserve or enhance the	<p><u>Proximity of historic environment receptors</u> Conservation Areas: None within 1km; Registered Parks and Gardens: The Long Walk, Knaresborough (Grade II) (Designation ID 1,000,132) is 3.4km SE. Ripley Castle (Grade II) (designation ID 1000401) is 4 km to west; Registered battlefields: None within 5km; World Heritage sites: None within 5km; Scheduled Monuments: none within 2km; Listed</p>	✓	✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
historic environment and its setting, cultural heritage and character	<p>buildings: Brearton, 500m to north has 4 listed buildings (all Grade II). Scotton (50m to 1.3km away (at B6165 junction) has 10 listed buildings (Scotton Old Hall is Grade II*, others Grade II).</p> <p>Named Designed Landscapes: Scriven Park public park (1.8km SE), Bilton Hall unidentified parkland (2.2km S), Nidd Hall Country Estate (1.7km west).</p> <p>HLC Broad type - Enclosed land / HLC Type – Unknown planned enclosure</p> <p>Undesignated archaeology in this area includes evidence from metal detected finds, which include material of Roman, medieval and post-medieval date. There are also remains of former medieval field systems, which are likely to be associated with the nearby settlements of Brearton and Scotton, which are of medieval origin. There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the area, although current archaeological evidence for this is sparse as there has been limited archaeological fieldwork in this area to date.</p> <p>The HLC type of this area is unknown planned enclosure and as the allocation site is a smaller part of a larger area of similar character type, of which the legibility is partial. The proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 17% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>The Conservation Area at Scriven Park is considered sufficiently well screened to avoid effects.</p> <p>Local effects There are a number of heritage features which may be receptors to this quarry, including a nearby Quaker burial ground & Scotton Old Hall. The loss of tranquillity in particular would impact on the burial ground.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, in practice it may be possible that archaeological remains could be recorded and where necessary preserved, as necessitated by development management policies in the Plan.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p>It is assumed that the archaeological impact will occur throughout the duration of extraction. It is assumed that mineral extraction will result in the total and permanent destruction of the undesignated archaeological remains.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks, AONBs: No National Parks within 10km, Nidderdale AONB 7.5km W; Heritage Coast: None within 10km; ITE: None within 5km; Local designations- Harrogate Borough Council Special Landscape Area 1.1km south at closest point.</p> <p>National Character Area (NCA): Southern Magnesian Limestone; North Yorkshire and York Landscape Character Assessment: Area 6- Magnesian Limestone Ridge; District LCA: 98% of site in Harrogate Landscape Character Area 50 (Brearton and Nidd Arable Farmland), 2% site in Area 51 (Knaresborough Reclaimed Gravel Pits). Green Belt: No.</p> <p>Tranquillity: Disturbed - but it is in a transitional area; Urban intrusion: The site spans an area to the south and south east which is relatively disturbed by a higher density of small settlements, roads, former extraction and electricity transmission lines, and areas to the north that are predominantly rural; Light pollution: moderate – low. The area scores 72- 97, becoming lighter towards the south and Knaresborough, measured on a scale of 1-255, with 1 representing maximum darkness (CPRE, 2000).</p> <p>Local effects Site is not within any designated landscapes. There is not much woodland in this area, but villages are important to character. So a key objective is to avoid development between the settlements which might impact on their setting. The site is close to the village of Brearton (0.5km) and very close to northern parts of the village of Scotton. There are footpaths between them which appear</p>	✓	✓	✓		-	-	-
						--	--	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>to be well used.</p> <p>The site is located in a relatively low-lying gently undulating area of mixed farmland containing attractive small villages. Extraction would result in a westerly extension of the character of the area to the east identified by Harrogate LCA as 'Knaresborough reclaimed gravel pits', indicating extensive former disturbance and an altered landscape. There has been a historic loss of field boundaries in the area, which extraction would further continue (though how much would depend on restoration).</p> <p>The character of the site is currently entirely rural, although there is a restored landfill site adjacent to the southern boundary (Low Moor Lane Tip) which indicates that the area is not completely undisturbed. The tip site has not been returned to agricultural uses although it incorporates open space. To the immediate south there is a further distinct change in character to a higher and more undulating landscape which is picked up by the Harrogate LCA (North Knaresborough Improved Grassland).</p> <p>There are minor to major negative impacts as a result of this in the short and medium term. In the longer term the site would be restored, but at a lower level with no historic landscape features remaining. It is not known whether the restoration would include water bodies, or whether the productive Grade 3 agricultural land would be replaced (further information is needed).</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The A1(M) lies around 7.2km east of the site and proximity to market, particularly York, Leeds and Harrogate is good.</p> <p>Local effects This site would ultimately result in up to 2.9 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight.</p> <p>Plan level / regional / wider effects Considered in local effects above.</p>		✓	✓	✓	m-	m-	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability In Claro Index of Multiple Deprivation (IMD) Area. Not in most deprived 20%. Scotton is the closest settlement 150m south. Brearton also lies 550m north and Lingerfield lies 900m south-east.</p> <p>Local effects Some job opportunities would arise from this site, and while the site would provide a source of sand and gravel which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. There could be minor impacts on the caravan site 350 m east (noise / dust) and the golf driving range to the south. Opportunities exist following restoration for the site to boost tourism in the area should a recreational use be implemented. Relative to the size and proximity of nearby communities this site could be a significant feature which may affect individuals' perceptions of their local area, with consequent effects on community vitality (a less tangible effect, adding uncertainty to the assessment).</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		m-	m-	?
						?	?	

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> A footpath/bridleway 15.115/2/1 passes through the site in the NE corner and then lies adjacent to the eastern boundary of the site (this route also forms part of the Knaresborough Round long distance route). Another footpath runs adjacent to the western boundary of the site 15.115/1/1 and leads in to 15.17/7/1 90m North of the site. No common land or village greens identified within 500m.</p> <p><u>Local effects</u> Footpath 15.115/2/1 would need to be re-routed where it crosses the site as a result of the development, and would need screening where it lies adjacent. This footpath / bridleway and other routes in close proximity to the site may experience amenity impacts such as dust, noise and visual impacts (including, for the bridleway, impacts on horses). There appears to be a recreational open space between this site and Scotton in the Harrogate Local Plan. This is associated with the Low Moor Lane tip restoration. Users of this space may, in a similar way to rights of way, experience some amenity impacts.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓		m-	m-	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> A primary school lies 200m east of the site. No hospitals, clinics or health centres lie within 1km. Nearest settlements are Scotton 150m south, Brearton 550m N and Lingerfield 900m south-east. Nearby properties- Lawrence House Farm 40m south, several properties 190m south.</p> <p><u>Local effects</u> There are scattered buildings and settlements around this site which may be within range of noise and dust impacts, particularly as soil is stripped or re-profiled (if wet-worked dust may lessen, though some operations such as drying may also generate dust). The site is also likely to result in increased levels of traffic on local roads surrounding the site, a possible health and safety and noise / dust risk. Restoration may bring some wellbeing benefits (although this is currently uncertain as site restoration plans are unknown). Relative to the size and proximity of nearby communities this site could be a significant feature which may affect individuals' perceptions of their local area (e.g. through traffic, diversions to rights of way and a general feeling that a large once accessible area would be quarried), with consequent wellbeing effects).</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	m-	m-	?
16. To minimise flood risk and reduce the impact of flooding	<p><u>Proximity to flood zones</u> Majority of site in Flood Zone 1. Very small area along northern boundary in Flood Zone 2 and Flood Zone 3 (0.5% in each). Around 5% of site is at high risk of surface water flooding (1 in 30); further 2 % at medium risk (1 in 100) and a further 5% at low risk (1 in 1000).</p> <p><u>Local effects</u> This site is not particularly prone to flooding and sand and gravel extraction is considered to be water compatible. In the longer term, restoration to a water use may be beneficial in terms of reducing flood risk elsewhere in the catchment. A Flood Risk Assessment is required.</p> <p><u>Plan level / regional / wider effects</u> None noted</p>		✓	✓	✓	0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the Plan area.</p> <p>Plan level / regional / wider effects None noted.</p>		✓		✓	m+	m+	0

Cumulative / Synergistic effects ⁴¹	
Planning context	Scotton is the closest settlement 150m south. Brearton also lies 550m north and Lingerfield lies 900m south-east. The nearest houses in Knaresborough lie about 1.5km south. Knaresborough is a Group A settlement in Harrogate's Core Strategy (main focus of growth). There appears to be a recreational open space between this site and Scotton, but this site does not conflict with any other allocations.
Other Minerals and Waste Joint Plan Sites	None within 2km.
Historic minerals and waste sites	To the immediate south-east tipping was granted in the 1950s and 1990s (Low Moor Lane Tip). Addymans Plant and Skip Hire (transfer station / recycling) lies 1.5 km south west. 700m south-east there is a historic landfill site.
Biodiversity Impacts	If biodiversity led restoration is pursued (uncertain) there could be a cumulative positive effect – for instance, the River Tutt restoration scheme nearby would link well with shallow wetland areas if created on site.
Landscape effects	Extraction would result in a westerly extension of the character of the area to the east identified by Harrogate LCA as 'Knaresborough reclaimed gravel pits', indicating extensive former disturbance and an altered landscape. There has been a historic loss of field boundaries in the area, which extraction would further continue (though how much would depend on restoration).
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any	

⁴¹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Hydrological survey and design to mitigate impact on ecological issues, in particular protected species and possible dust and hydrology issues on nearby Farnham Mires SSSI and Dovecote Carr
- Consultation with Internal Drainage Board over any works that would affect Percy Beck
- Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources.
- Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels)
- Design to include suitable flood risk assessment (with surface runoff restricted to greenfield run off rate) and use of SUDS.
- Design to include suitable arrangements for diversion and avoidance of impacts on nearby public right of way.
- Archaeological field evaluation and suitable mitigation strategy to be put in place;
- Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust;
- Appropriate restoration scheme using opportunities for habitat creation

While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain (for instance in relation to community / wellbeing). The Plan's decision has been to discount this site.

MJP35 – Ruddings Farm, Walshford

Site Name	Site MJP35 (Ruddings Farm, Walshford, Kirk Deighton, Harrogate)
Current Use	Current Use: agriculture
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 40.5 ha
Proposed life of site	Proposed life of site: Unknown at present
Notes	Notes: Proposed new quarry. Restoration unknown at present.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	<p><u>Proximity of international / national and local designations and key features</u> SAC/SPA: 2km south-west - Kirk Deighton SAC; SSSI: 2.15km from Kirk Deighton SSSI, Aubert Ings SSSI is 3.4km east of site within a meander of River Nidd; SINC: Nearest SINC is 1.55km away (SE45 - 05 - Sugden Wood).</p> <p>Priority Habitat: None on site or immediately adjacent. An area of deciduous woodland lies 130m to the north. Eco networks: Site does not lie within a Living Landscape area however NY26 Knaresborough</p>	✓	✓	✓	✓	-	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
connectivity	<p>Nidd Woodlands lies circa 80m north. GI: Site lies almost entirely within Nidd regional GI corridor.</p> <p>Site visit: ponds; pasture / grassland; arable; woodland / copse; hedgerows; standalone trees and brownfield land noted as present on site.</p> <p>Local effects No impacts to SINC's are predicted. There are possible adverse impacts to River Nidd, which acts as a wildlife corridor, given its proximity.</p> <p>Aerial photos / OS map show the site is mostly arable, with some agricultural grassland (probably improved). Broad Wath Beck and other unnamed ditches, balancing pond, hedges with standard trees are present on site. Judging by the habitats on site protected species that could be affected include bats, amphibians, nesting birds, otter, and water voles. The site is bordered by the River Nidd. There are opportunities through appropriate restoration to create/enhance priority habitats, especially adjacent to the river, to improve habitat connectivity and species movement.</p> <p>To summarise, in the short term there are possible negative impacts to protected sites and species and River Nidd while in the longer term, depending on restoration, there may be opportunities to create priority habitats, especially along/adjacent to the river, possibly to link with the green infrastructure corridor. If wetland habitat were to be proposed, there would be a need for such proposals to consider the appropriateness and genuineness of the potential benefits of such habitats whilst considering, for example, the nearby surrounding ecology, biodiversity action plan objectives and aerodrome safeguarding zones.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Plan level / regional / wider effects Kirk Deighton SAC is notified for its breeding population of great crested newt. Considering pathways for effects from proposal on this site, it is considered highly unlikely there would be a significant effect on the SAC / SSSI as there are numerous intervening superficial deposits, including those with lower permeability, such as clays, between this site and the receptor which is 2km away⁴². However, should the site be developed hydrological impacts should be further investigated. Aubert Ings SSSI (unimproved neutral grassland) is 3.4km east of site within a meander of River Nidd. Although it is unlikely to be impacted it may provide suggestions as to the scope for restoration opportunities & the associated issues, but that depends on the depth of extraction.</p>							
	<p>⁴² This conclusion is based on a review of the BGS Geology of Britain viewer [URL: http://mapapps.bgs.ac.uk/geologyofbritain/home.html]</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site in a Nitrate Vulnerable Zone (groundwater); no groundwater source protection zones onsite or adjacent; In Humber River Basin Management Plan (RBMP). Nearest section of river is 'River Nidd from Crimple Beck to River Ouse' (current ecological quality- moderate potential, current chemical quality- does not require assessment) at 0 m distance (cuts through site). No RBMP lakes. Groundwater: majority of site in SUNO Sherwood Sandstone (current quantitative quality- good, current chemical quality- poor), small area of site (south-west corner) is in SUNO (Swale, Ure, Nidd, Ouse) Magnesian Limestone Sandstone (current quantitative quality- good, current chemical quality- good). CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects This development is likely to require the diversion of the onsite tributary of the River Nidd which, without mitigation could have significant effects on water body status. Spillages could affect groundwater, particularly if extraction at the site would involve working below the water table. Groundwater flow may also be affected. This could affect levels in other water bodies in the vicinity, if there is hydraulic connectivity. In the absence of further information with regard to hydrology, significance is rated as highly negative but with considerable uncertainty as it is likely that at least some hydrological features will be permanently changed and some may be mitigated for. Impacts may lessen over time as restoration restores some hydrological regimes. Many impacts may be avoidable through sound environmental management.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		--	--	-
						?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptor The A1(M) passes through the site and proximity to market, particularly York, Leeds and Harrogate is very good. Access: Location unknown at present, but site abuts parts of Wetherby Lane (C273) and the A168. HGV Vehicles: 72 (estimate) Light Vehicles: 10 (estimate).</p> <p>Net change in daily two-way trip generations: Light vehicles: 10; HGVs: 72. Traffic assessment rating: yellow.</p> <p>PROW: This site is not affected by a registered public right of way</p> <p>Rail: 3.3km north (Cattal Station 4.3km north-east) / Railhead: 29km south-east; Strategic Road: The A1(M) passes through the site; Canal / Freight waterway: Ouse 9.6km east.</p> <p>Local effects While the proposed access is currently unknown, it would either be from the adjacent Wetherby Lane (subject to a 7.5 tonne restriction which if used may require review) or from the A168. The Highways Assessment which has informed this report states that access is acceptable onto the A168 County Road though minor works may be required to improve the existing access arrangements.</p> <p>Traffic modelling suggests that a third of HGVs from the site would head north, with two thirds of traffic expected to head to the south. For the route to the north the traffic assessment concludes that <i>“given the minimal number of additional HGVs from this submission which would use the route and the existing volumes of traffic and HGVs likely to be already on these routes, it is expected that traffic impacts will be minimal”</i>. To the south most traffic would head to Leeds and Bradford via either the A1(M) and the M1, or via the A168 Wetherby Bypass and A58 (which passes through a number of settlements). Up to 30 HGVs a day could be added to the A58, which given the high traffic use of that road would be only a tiny fraction of the overall traffic levels, though would still, according to the traffic assessment, be ‘not desirable’. We have therefore rated this as minor negative.</p> <p>Sustainable transport is unlikely to contribute to the access of the site and a transport assessment will be required.</p>		✓		✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Existing access on the A168 is considered the preferred access by the Highway Authority. A traffic assessment is required. Plan level / regional / wider effects None noted.							
4. To protect and improve air quality	Proximity of air quality receptors No Air Quality Management Areas (AQMA) or Hazardous substances consultation zones. A number of settlements and individual properties lie within 1km of the site (including Walshford 300m north, Cowthorpe 460m east. Properties- Ruddings Farm 60m west, Ox Close House 300m west, Deighton Grange 275m south, Hall Garth 220m south). Local effects The site lies in close proximity to a number of residential receptors which may experience air quality impacts in relation to dust from the site. Should wet-working take place at the site dust impacts would be less likely, aside from during initial soil stripping and during restoration. Minor negative impacts are predicted during site construction, operation and restoration, with uncertainty noted depending on whether the site would be wet worked. Long term impacts are uncertain as site restoration plans are currently unknown. Traffic pollution would also be generated, which if traffic used the A58 as predicted, could add very slightly to levels experienced along the A58 in particular. Plan level / regional / wider effects None noted.		✓	✓		-	-	-
						?	?	?
5. To use soil and land efficiently and	Proximity of soil and land receptor ALC: Northern 30% of site in Grade 3, rest of site in Grade 2. Contaminated land: Greenfield site / not applicable.	✓	✓	✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
safeguard or enhance their quality	<p>Local effects Up to 40.5 ha of best and most versatile land could be lost. Some of this may be restored (although this is uncertain at present).</p> <p>Plan level / regional / wider effects While best and most versatile land is a nationally important resource, the impacts are considered of local significance (albeit at a higher level of local significance) and are considered above.</p>							?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Priority Habitat: None on site or immediately adjacent. An area of deciduous woodland lies 130m to the north. Site visit: ponds; pasture / grassland; arable; woodland / copse; hedgerows; standalone trees and brownfield land noted as present on site.</p> <p>Local effects Impacts from loss of on-site habitats are considered to be negligible.</p> <p>Plan level / regional / wider effects An annual output of 150,000 tonnes of sand and gravel will require to be transported from site. The A1(M) passes through the site and access to market, particularly York, Leeds and Harrogate is very good. It is therefore considered that the location of the site would not constitute a significant additional source of carbon. Overall, impacts are considered to be minor cumulatively rising to moderate negative. The impact is a permanent addition to atmospheric carbon.</p>	✓			✓	-	-	-
7. To respond and adapt to the effects of	<p>Proximity of factors relevant to the adaptive capacity⁴³ of a site Circa 60% of the site lies in Flood Zone 3 and a further 10% lies in Flood Zone 2. About 5% of site is at 1 in 30 risk of surface water flooding, a further 3% at 1 in 100 risk and further 5% at 1 in 1000 risk. No ecological/habitat networks</p>	✓	✓	✓		-	-	m+

⁴³ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
climate change	<p>onsite or adjacent. CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Flooding is considered insignificant to minor negative as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. The site is considered unlikely to impair the movement of species vulnerable to climate changes. In the longer term restoration to nature conservation could provide an opportunity to deliver climate change adaptation (e.g. habitat refuge) or restoration to water may be beneficial in terms of reducing flood risk elsewhere in the catchment. These impacts are uncertain however as restoration plans are unknown.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 150,000 tonnes of virgin minerals would be extracted each year which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue during the operational lifetime of the site.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		m-	m-	?
9. To minimise waste generation and prioritise	<p>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p>					-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
management of waste as high up the waste hierarchy as practicable	<p>Local effects None noted.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations, but this is considered to be of low significance.</p>							
10. To conserve or enhance the historic environment and its setting, cultural	<p>Proximity of historic environment receptors Hunsingore (DNY979) Conservation Area lies 880m north-east; Registered Parks and Gardens: Ribston Hall (Grade II, ID 1,001,071) 80m north-west, Allerton Park (Grade II, ID 1,000,402) 4.5km north; Registered battlefields: Battle of Marston Moor (ID 1,000,020) 4.9km east; World Heritage sites: None within 5km.</p> <p>Scheduled Monuments: Site of medieval hall 130m south of Manor Farm (ID 1,018,133) 1km north-east, Howe Hill motte and bailey castle (ID 1,015,541) 1.6km south-west. Listed buildings: 8 listed</p>	✓		✓	✓	--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
heritage and character	<p>buildings within 1km (1 Grade I, 1 Grade II* and 6 Grade II), 'Walshford Lodge to Ribston Hall (NHLE no. 1,315,596) is nearest at 270m north.</p> <p>Named Designed Landscapes: Ribston Park 80m north-west, Ingmanthorpe Park 1.5km south. HLC Broad type - Enclosed land / HLC Type – modern improved fields and a smaller part is unknown planned enclosure.</p> <p>Undesignated archaeology in this area includes evidence from aerial photographic transcriptions of a landscape containing a number of sites and features of probable later prehistoric and Romano-British date. These are located in the fields to the west, and south-west of the proposed allocation site, and within the central part of the allocation site, to the east of the A1(M). They comprise a number of rectilinear enclosures and ring ditches, suggestive of settlement sites with associated trackways and boundary features. In addition, Roman and medieval pottery was recovered from this area during field walking associated with the A1 upgrade works in the early 1990s.</p> <p>There is also a medieval interest to the immediate south, to the south of Wetherby Road, in the remains of the former Ingmanthorpe Hall and associated medieval moated site, and associated field systems.</p> <p>Evidence of former medieval fields systems has also been recorded within the allocation site, which may be masking earlier features.</p> <p>Local effects Site MJP35 could harm elements which contribute to the significance of a number of designated heritage assets in its vicinity. This requires site-level research and assessment in order to establish the contribution that this site would make to the significance of designated heritage assets.</p> <p>The HLC type of this area is a combination of modern improved fields and a smaller part is unknown planned enclosure. The former has fragmentary visibility and covers the majority of the proposed allocation site, which is a smaller part of a much wider area of similar historic landscape character. The latter has significant legibility and comprises a few fields in the south-eastern corner of the site, which form a smaller part of a larger area of similar character which extends to the east, beyond the allocation site.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>It is felt that the proposed extraction is likely to have an insignificant impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p> <p>Plan level / regional / wider effects The site is just 80 metres north west of Ribston Hall Registered Park and Gardens. The proximity of the western part of the site to the registered historic designed landscape of this Grade II feature and the effect on its setting is considered highly significant until further survey work is undertaken.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks, AONBs: None within 10km; Heritage Coast: None within 10km; ITE: None within 5km in plan area (may be areas outside).</p> <p>NCA: Southern Magnesian Limestone; NY&Y LCA: Area 24- River Floodplain; District LCA: Harrogate LCA- Area 56- North Wetherby Arable Rolling Land, Area 100- Kirk Deighton to Tockwith Arable Farmland, Area 97- Nidd Corridor (Ribston Park- Cattal Reach). Tranquillity: Disturbed. Urban intrusion – although rural, it lies within the A1(M) corridor and is very much affected by noise and views of traffic movement (CPRE 2007); Light pollution: low to moderate as levels are 87 on a scale of 1-255, with 1 representing maximum darkness (CPRE 2000)</p> <p>Local effects There are no predicted effects on any nationally or locally designated landscapes. However, the site is close to Walshford (around 0.25km at its closest point) which has a cluster of listed buildings, and is under 0.5km from Cowthorpe, affecting views of the approach to the village from the west.</p>	✓	✓	✓	✓	--	--	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The area is low-lying (site is largely within the floodplain of the River Nidd) and the area is already disturbed by road construction. There has been previous quarrying at Deighton Grange to the south, and there has been loss of historic field boundaries and hedgerow trees. Further similar features could be lost with extraction in the eastern part site. In the long term the area could probably accommodate the proposed development, subject to a satisfactory restoration scheme.</p> <p>The impact on the setting of the 'undesigned' Ruddings Farm & the Ribston Lodge listed building at</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Walshford is potentially significant.</p> <p>The site will be very visible from the A1(M), and local roads (Ox Close Lane/Wetherby Lane) joined by overpass which provides panoramic views over both parts of the site.</p> <p>The site may be partly screened form the A1(M). Traffic from the site is unlikely to affect the character of the area as the area is already affected by the A1(M) and A168.</p> <p>The high visibility of this site (contributing to adverse perceptions of the area by high numbers of travellers), the difficulty of mitigating views, the proximity to settlements, the proximity of the western part of the site to the registered historic designed landscape of Ribston Park (Grade II) and the effect on the setting of Ruddings Farm and Ribston Lodge, and the loss of minor tributary valley and associated vegetation all contribute to the significance of adverse effects during the operational period (though short and medium term effects cannot properly be assessed until timescale is known). However, there is scope for an acceptable wet restoration scheme which could reduce the long term impacts to minor negative or neutral, although there would be irreversible loss of BMV agricultural land.</p> <p><u>Plan level / regional / wider effects</u> Considered amongst local effects above.</p>							?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> The A1(M) passes through the site and proximity to market, particularly York, Leeds and Harrogate is very good.</p> <p><u>Local effects</u> This site would ultimately result in 2.1 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight.</p> <p><u>Plan level / regional / wider effects</u> As local effects above.</p>		✓	✓	✓	m+	m+	m+
								0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> In Ribston and Marston Moor IMD Area. Not in most deprived 20%. Walshford is the nearest settlement (300m north) and Cowthorpe also lies 460m east.</p> <p><u>Local effects</u> Some job opportunities would arise from this site, and while the site would provide a source of sand and gravel which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. Impacts are therefore considered to be neutral in relation to this objective. Opportunities exist following restoration for the site to boost tourism in the area should a recreational use be implemented.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
								?
14. To provide opportunities to enable recreation, leisure and	<p><u>Proximity to recreation, leisure and learning receptors</u> Footpath 15.68/3/1 starts 40m south of the site, bridleway 15.100/5/1 begins 100m west of the site. No common land or village greens identified within 500m.</p> <p><u>Local effects</u> It is considered that the nearby rights of way will already experience high levels of disturbance in proximity to the site from the A1(M). However users of these routes may experience</p>		✓	✓		-	-	-
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
learning	<p>further visual, noise and dust impacts as a result of the allocation and therefore impacts are considered to be minor negative during the operation of the site.</p> <p>Plan level / regional / wider effects None noted.</p>							
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlements are Walshford 300m north and Cowthorpe 460m east. Nearby properties- Ruddings Farm 60m west, Ox Close House 300m west, Deighton Grange 275m south, Hall Garth 220m south.</p> <p>Local effects There are scattered buildings and settlements around this site which may be within range of noise and dust impacts, particularly as soil is stripped or re-profiled (if wet-worked dust may lessen, though some operations such as drying may also generate dust), though routine measures are likely to reduce effects (minor negative is noted however due to the proximity of Ruddings Farm). Restoration may bring some wellbeing benefits (although this is currently uncertain as site restoration plans are unknown). Traffic pollution may also have a very slight impact on air pollution on the A58, though effects from the traffic generated at this site would be below any significance threshold.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	?
16. To minimise flood risk and	<p>Proximity to flood zones Circa 60% of the site lies in Flood Zone 3 and a further 10% lies in Flood Zone 2. About 5% of site is at 1 in 30 risk of surface water flooding, a further 3% is at 1 in 100 risk and</p>		✓	✓		0	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
reduce the impact of flooding	<p>further 5% is at 1 in 1000 risk.</p> <p>Local effects Flooding is considered insignificant as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. In the longer term, restoration to water in the floodplain may be beneficial in terms of reducing risk elsewhere in the catchment (though restoration is currently uncertain). A flood risk assessment is required.</p> <p>Plan level / regional / wider effects None noted.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects Considered together with plan wide effects below.</p> <p>Plan level / regional / wider effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the Plan area.</p>		✓	✓		m+	m+	m+

Cumulative / Synergistic effects ⁴⁴	
Planning context	Within 2km Walshford is the nearest settlement (300m north) and Cowthorpe also lies 460m east. Neither is within Harrogate's settlement hierarchy.
Other Minerals and Waste Joint Plan Sites	None within 2km.

⁴⁴ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Historic minerals and waste sites	Within 2km Deighton Grange / Ingmanthorpe Grange extraction site lies (granted 2000s) 230m south. Deighton Whin Borrow Pit Extension is 840m south. Goosemoor Farm (tipping) lies 1/3km south-west.
Landscape Impacts	There has been previous quarrying at Deighton Grange to the south, and there has been loss of historic field boundaries and hedgerow trees. Further similar features could be lost with extraction in the eastern part site.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular protected species and possible hydrology issues • Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources. • Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels) • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate and mitigation of any hydrogeomorphic impacts on the river, and on groundwater supplies. • Design to include suitable arrangements for avoidance of impacts on nearby public right of way. • Archaeological field evaluation and suitable mitigation strategy to be put in place, as well as investigation of impacts on the significance of designated historic assets⁴⁵; • Design to include suitable arrangements for access and local roads, including an appropriate transport assessment. • Appropriate arrangements for control of and mitigation of the effects of noise, dust; • Appropriate restoration scheme using opportunities for habitat creation and links to green infrastructure. <p>While mitigation for a number of effects is possible and referred to in the assessment above the Plan's decision has been to discount this site.</p>	

⁴⁵ This should include (1) An assessment is undertaken of the contribution which this site make to the designated heritage assets in its vicinity and what impact the proposed development might have upon their significance. (2) If it is considered that the development would harm elements which contribute to the significance of any of the nearby heritage assets, then the Plan needs to set out how that harm might be removed or reduced.(3) If, at the end of the process, it is concluded that the development would still be likely to harm elements which contribute to the significance of any of the heritage assets, then that site should not be allocated unless there are clear public benefits that outweigh the harm.

MJP37 – Moor Lane Farm, Great Ouseburn

Site Name	Site MJP37 (Moor Lane Farm, Great Ouseburn, Harrogate)
Current Use	Agriculture and woodland
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 99 ha
Proposed life of site	Proposed life of site: Unknown at present
Notes	Notes: Proposed new quarry. Restoration unknown at present.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p><u>Proximity of international / national and local designations and key features</u> SAC/SPA: 10km SW Kirk Deighton SAC; SSSI: 1km from nearest SSSI (Upper Dunsforth Carrs); SINC: Broadfield Wood SINC (SE45-08) 0.53km away, Ouse Gill Beck Wetlands (SE46 - 03) 0.35km away. Bog Plantation (deleted SINC) 0.7km away. Allerton Park SINC (SE45-07) 0.95km away. Marton Cum Grafton Carr (SE46-07) is 1.615km away. Marton Cum Grafton Field (SE46-08) is 1.67km away. Functional connectivity: Lylands Wood connects site to Broadfield Wood.</p> <p>Priority Habitat: Deciduous woodland adjacent to south-west (with very small overlap). Deciduous wood also on site in NE of site. Deciduous woodland to south west (0.13km) and south of site also (0.17km).</p>	✓	✓	✓		-	-	-
						--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Eco networks: A small area of the site circa 5% is covered by core EHN (woodland). GI: The site does not lie within a GI corridor however 'D1 Allerton Park district GI corridor' lies adjacent to the south and R9 Ouse regional GI corridor lies adjacent to the north.</p> <p>Local effects There may be potential impacts to Ouse Gill Beck Wetland SINC 0.35km from MJP37 which need to be investigated and there may be a hydrological impact on Upper Dunsforth Carrs if the site is wet worked.</p> <p>The Site is predominantly arable, but includes a small woodland (The Dale) which contains a strip of Ancient Semi Natural Woodland (ASNW). Lylands Wood, which is listed as ASNW, lies adjacent to the site to the south. This would need a buffer. There are also local issues with loss of boundary features.</p> <p>There may also be impacts on other habitats. According to the site visit an unnamed beck flows through MJP37 and drains to Ouse Gill Beck. This beck forms part of Ouse Gill Beck Wetland SINC 0.35km from MJP37. Potential (e.g., hydrological) impacts would need to be investigated, though given the short distance it would appear that there might be a not insignificant risk (uncertainty noted).</p> <p>Protected species that could be affected include bats, nesting birds, and badger. Himalayan balsam recorded along Ouse Gill Beck (0.35km from site) could be a future management problem, particularly during restoration.</p> <p>To summarise, in the short and medium term there would be the direct loss of a small area of ancient woodland and possible impacts to adjacent ancient woodland and protected species. In the long term effects would continue as there would be a permanent loss of nationally important ancient woodland.</p> <p>Plan level / regional / wider effects Considering source - pathway - receptor for this site it is considered that there would be no significant effects on any Natura 2000 site. Similarly, there is unlikely to be any impact on a SSSI.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p><u>Proximity of water quality / quantity receptors</u> Site in a Nitrate Vulnerable Zone (groundwater); no groundwater source protection zones onsite or adjacent; In Humber RBMP. Nearest section of river is 'River Ouse from Source to River Ure' (current ecological quality- good status, current chemical quality- does not require assessment) at 0 m distance (begins adjacent to the site to the east). No RBMP lakes. Groundwater: SUNO Sherwood Sandstone (current quantitative quality- good, current chemical quality- poor).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p><u>Local effects</u> Although there are no RBMP rivers on site, an unnamed watercourse runs through the site and joins the 'River Ouse from Source to River Ure' at the eastern site boundary. This development is likely to require the diversion of this watercourse which, without mitigation could have significant effects on downstream water body status. Spillages could also affect groundwater, particularly if extraction at the site would involve working below the water table. Groundwater flow may also be affected. This could affect levels in other water bodies in the vicinity, if there is hydraulic connectivity. In the absence of further information with regard to hydrology, significance is rated as major negative but with considerable uncertainty. Impacts may lessen over time as restoration restores some hydrological regimes. Impacts may be mitigatable through sound environmental management.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓		✓		--	--	--
						?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The A1(M) lies in relatively close proximity to the site and proximity to market, particularly York, Leeds and Harrogate is relatively good. Access: Location unknown at present, but site abuts Moor Lane (bridleway) and part of the B6265.</p> <p>HGV Vehicles: 72 (estimate); Light Vehicles: 10 (estimate); PROW: Moor Lane is a bridleway and its status would need to be changed and improvements to the carriageway would be required.</p> <p>Rail: 4.2km south / Cattal Station is 4.9km south-east / Railhead: circa 35 km south-east; Strategic Road: A1(M) is 1.4km east (circa 4.5km south-east to Junction 47); Canal / Freight waterway: Ouse is 3km east.</p> <p>Local effects This site does not have sufficient frontage to enable an access of acceptable standards onto an existing highway. Works would therefore be required to address this. No sustainable transport options seem likely for this site. A Transport Assessment is required. Traffic may combine with that of Allerton Waste Recovery Park and WJP08 on A168 with possible pressure at Junction 59 if access is obtained from the west end of Moor Lane; if obtained from the east end of Moor Lane off the B6265 then it would be unlikely to impact on the A168 but may still impact Junction 59 via the B6265 & A59.</p> <p>The site is not likely to generate significant passenger travel demand.</p> <p>Plan level / regional / wider effects None noted.</p>		✓		✓	-	-	-
4. To protect and improve air quality	<p>Proximity of air quality receptors No AQMAs within 2km. The site does not lie within a Hazardous substances consultation zone. A number of settlements and individual properties lie within 1km of the site (including Great Ouseburn 900m east, Little Ouseburn 950m south-east. Properties- Moor Farm and 3-4 other properties appear to lie within the site boundary (but it is assumed that the boundary would skirt these properties), Lylands Farm 120m south, Marton Cottage Farm 400m north, Low Farm</p>		✓	✓		m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>300m north).</p> <p>Local effects The site lies adjacent to and in close proximity to a number of residential receptors which may experience air quality impacts in relation to dust from the site. Should wet-working take place at the site dust impacts would be less likely, aside from during initial soil stripping and during restoration. Dust deposition may also impact upon Lylands Wood which lies adjacent to the site to the south. Minor to moderate negative impacts are predicted during site construction, operation and restoration, with uncertainty noted depending on whether the site would be wet worked. Long term impacts are uncertain as site restoration plans are currently unknown.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptor ALC: Grade 2; Contaminated land: Greenfield site so not applicable.</p> <p>Local effects Up to 99 ha of best and most versatile land could be lost, which would be highly significant. Some of this may be restored (although this is uncertain at present).</p> <p>Plan level / regional / wider effects 99ha of best and most versatile land is a significant figure which is also arguably of greater than local significance.</p>	✓		✓		--	--	-- ?
6. Reduce the	Proximity of factors relevant to exacerbating climate change Priority Habitat: Deciduous woodland	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
causes of climate change	<p>adjacent to SW (with very tiny overlap). Deciduous wood also on site in NE of site. Deciduous woodland to south west (0.13km) and south of site also (0.17km).</p> <p>Local effects It is assumed that the site would result in the loss of an area of deciduous woodland priority habitat, and a number of hedgerows and standalone trees. Although these features have relatively high carbon storage potential this impact is considered to be minor.</p> <p>Plan level / regional / wider effects An annual output of 150,000 tonnes of sand and gravel will require to be transported from site. The site lies in close proximity to the A1(M) and access to market, particularly York, Leeds and Harrogate is good. It is therefore considered that the location of the site would not constitute a significant additional source of carbon. Overall, impacts are considered to be neutral to minor negative and uncertain in the long term as the site may offer opportunities to create new carbon sinks as part of the site restoration, however this is unknown at present.</p>							?
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity⁴⁶ of a site The site lies in Flood Zone 1. About 7% of the site is at 1 in 30 risk of surface water flooding, a further 2% at 1 in 100 risk and 5% at 1 in 1000 risk. A small area of the site circa 5% is covered by core EHN (woodland). CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more</p>					m-	m-	m-

⁴⁶ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>restricted.</p> <p>Local effects Site is not particularly prone to flooding and is water compatible. Although there is some overlap with a species movement envelope listed in the England Habitat Network this is at the end point of a small network of woodland habitats and is not connected to any further habitats (so no significant effect from extraction). In the longer term the network could be extended to encompass the isolated woodland patch in the northeast of the site and beyond through restoration features which make the landscape more permeable, such as hedgerows and copses.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that 150,000 tonnes of virgin minerals would be extracted each year which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue during the operational lifetime of the site. All primary minerals sites work against the SA objective to a degree, so score negatively.</p> <p>Plan level / regional / wider effects Considered at a local level</p>					--	--	--
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations.</p>					m-	m-	m-
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Great Ouseburn (DNY990) Conservation Area lies 900m east and Little Ouseburn Conservation Area lies (DNY989) 1km east; Registered Parks and Gardens: Allerton Park (Grade II, ID 1.000,402) lies 950m SW; Registered battlefields: Battle of Myton (ID 1,000,021) 4.7km N; World Heritage sites: None within 5km; Scheduled Monuments: None within 2km; Listed buildings: 5 listed buildings within 1km (all Grade II). One lies adjacent to site (Milestone, NHLE no. 1,315,413) and one lies circa 10m from the boundary (Column approx. 10m south of the bungalow, NHLE no. 1,150,280).</p> <p>Named Designed Landscapes: Allerton Park 160m SW, unnamed (HNY24119) 1.4km north, Unnamed (HNY24109) 1.4km E, Kirby Hall 1.6km E.</p> <p>HLC Broad type - Enclosed land / HLC Type – modern improved fields and a smaller part is planned</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>large scale Parliamentary enclosure.</p> <p>Undesignated archaeology in this area includes evidence from aerial photographic transcriptions of a landscape containing a number of sites and features of probable later prehistoric and Romano-British date. These are located both within the proposal allocation site, and in the fields to the immediate north and south east. There is high potential for associated remains of medieval settlement and activity to extend into the allocation area. Evidence of former medieval fields systems has also been recorded within the allocation site, which may relate to the deserted settlement of Lylands, and may also be masking earlier features.</p> <p>Local effects The HLC type of this area is a combination of modern improved fields and a smaller part is planned large scale Parliamentary enclosure. The former has fragmentary visibility and covers the majority of the proposed allocation site, which is a smaller part of a much wider area of similar historic landscape character. The latter has significant legibility and comprises a few fields around Moor Farm, which forms a smaller part of a larger area of similar character which extends to the north, beyond the allocation site.</p> <p>It is felt that the proposed extraction is unlikely to have a major impact upon the area which is modern improved fields, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>It is felt that extraction would have a negative effect upon the area that is planned large scale Parliamentary enclosure. However, as this is a smaller part of a larger area of similar historic landscape character, the effect is considered to be minor negative.</p> <p>In terms of archaeology there is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, in practice in most cases archaeological remains could be recorded and where necessary preserved in line with development management policy in the plan.</p> <p>The site may also be visible from the Grade II Allerton Park, as well as 2 local conservation areas, so assessment on the contribution this site makes to those assets is required</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks, AONBs: None within 10km; Heritage Coast: None within 10km; ITE: Upper Dunsforth 1km north-east</p> <p>NCA: Southern Magnesian Limestone; NY&Y LCA: Area 6- Magnesian Limestone Ridge; District LCA: Harrogate LCA Area 91 Marton Rolling Arable Farmland.</p> <p>Tranquillity: Disturbed. Urban intrusion: Disturbed (CPRE 2007) – the site lies within the noisy A1(M)</p>	✓		✓		--	--	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>corridor, and there is nearby quarrying, landfill and construction of a major waste facility. Light pollution: Low – 51 on a scale of 1 -255, with 1 representing maximum darkness (CPRE 2000). However, light pollution is likely to have significantly increased since 2000 in this area.</p> <p>Local effects There are unlikely to be any effects on nationally or locally designated landscapes. Similarly the setting of settlements is preserved as there are unlikely to be direct effects on Little Ouseburn or Great Ouseburn (both approximately 1km distant at nearest point).</p> <p>The site is largely screened from roads and settlements, but this is a relatively open landscape and it would be visible from public rights of way.</p> <p>This is a relatively tranquil area with an established small / medium field pattern & woodland so its loss would have a moderate harm to landscape character. There would be impacts on the bridleway & other rights of way. There are potential cumulative impacts with the Allerton Waste Recovery Park (AWRP) development. The site is also close to Allerton Park which is Grade II on the EH Register of Parks and Gardens which has influenced landscape character in the locality. Indeed, to the south west the landscape is estate influenced. The site is also within a landscape enhancement area for Allerton Park.</p> <p>The significance of impacts in this assessment is influenced by proximity to Allerton Park, cumulative effects on the setting, situation within the AWRP Landscape Management and Enhancement Zone where the presumption would be improvement not disturbance, effect on agricultural land, and likelihood of low level but dry restoration which may not integrate well with the surrounding landform and landscape pattern. However it may be possible to restore productive farmland, depending on contours.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> The A1(M) lies in close to the site and proximity to market, particularly York, Leeds and Harrogate is good.</p> <p><u>Local effects</u> This site would ultimately result in 2 million tonnes of sand and gravel being made available to the market. This would make a significant (moderate) contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight.</p> <p><u>Plan level / regional / wider effects</u> As local effects above.</p>		✓	✓		m+	m+	m+
								0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> In Ouseburn IMD Area. Not in most deprived 20%. Great Ouseburn is the closest settlement circa 900m east of the site.</p> <p><u>Local effects</u> Some job opportunities would arise from this site, and while the site would provide a source of sand and gravel which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. Impacts are therefore considered to be neutral in relation to this objective. Opportunities exist following restoration for the site to boost tourism in the area should a recreational use be implemented.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
								?
14. To provide opportunities to enable	<p><u>Proximity to recreation, leisure and learning receptors</u> Three rights of way run through the site, 15.48/4/1, 15.48/4/2 and 15.48/9/1. Additionally bridleway 15.48/2/1 runs along the northern boundary of the site. Two further footpaths run north from the northern boundary of the site. The site visit also</p>		✓	✓	✓	--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
recreation, leisure and learning	<p>noted an informal footpath connecting footpath 15.48/4/2 (from The Dale) to Moor Lane as footpath stops mid-way along field boundary. No common land or village greens identified within 500m.</p> <p>Local effects Three rights of way would need to be diverted as a result of the development, and 3 further rights of way would, at points be in range of visual, dust and noise impacts. It is also anticipated that the site would be accessed via Moor Lane (Bridleway 15.48/2/1) and users of this route would therefore experience increased levels of traffic and associated risks. Upon restoration rights of way may be restored however this is uncertain as restoration plans are currently unknown.</p> <p>Plan level / regional / wider effects None noted.</p>							?
15. To protect and improve the wellbeing,	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No hospitals, clinics or health centres lie within 1km. A number of settlements and individual properties lie within 1km of the site (including Great Ouseburn 900m east, Little Ouseburn 950m south-east.</p>		✓	✓	✓	m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
health and safety of local communities	<p>Properties- Moor Farm and 3-4 other properties appear to lie within the site boundary (but it is assumed that the boundary would skirt these properties), Lylands Farm 120m south, Marton Cottage Farm 400m north, Low Farm 300m north).</p> <p>Local effects There are scattered buildings and settlements adjacent and in close proximity to this site which may be within range of noise and dust impacts, particularly as soil is stripped or re-profiled (if wet-worked dust may lessen, though some operations such as drying may also generate dust). The access route to the site is also anticipated to be along Moor Lane bridleway and therefore users of this route are likely to be exposed to a greater health and safety risk due to increased levels of traffic, particularly HGVs. Restoration may bring some wellbeing benefits (although this is currently uncertain as site restoration plans are unknown). Impacts are considered to be moderate negative.</p> <p>A high pressure gas pipeline crosses the site which will require mitigation (possible re-routing).</p> <p>Plan level / regional / wider effects None noted.</p>							?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones The site lies in Flood Zone 1. About 7% of the site is at 1 in 30 risk of surface water flooding, a further 2% at 1 in 100 risk and 5% at 1 in 1000 risk.</p> <p>Local effects Site is not particularly prone to flooding and is water compatible. Impacts are therefore considered to be neutral during the operation of the site. A flood risk assessment is required.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population</u> The site does not conflict with any known allocations in other plans.</p> <p><u>Local effects</u> Considered together with plan wide effects below.</p> <p><u>Plan level / regional / wider effects</u> The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the Plan area.</p>		✓	✓		m+	m+	m+

Cumulative / Synergistic effects ⁴⁷	
Planning context	Great Ouseburn is the closest settlement circa 900m east of the site.
Other Minerals and Waste Joint Plan Sites	WJP08 lies circa 1km south-west.
Historic minerals and waste sites	A cluster of historic applications associated with extraction and tipping lie 1km south-west (Allerton Park), while the Allerton Waste Recovery Park is under construction 1.6km south-west. 1.6km north there are historic extraction applications (granted in 1950s) at Marton-cum-Grafton.
Landscape Impacts	The site would be a large site close to the Allerton Park Quarry/Landfill/AWRP sites so there would be cumulative effects on landscape character and views without mitigation, particularly for those using the PROW network. The site is also close to Allerton Park which is Grade II on the EH Register of Parks and Gardens which has influenced landscape character in the locality.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	

⁴⁷ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular protected species and protection for / buffering of Lylands Wood;
- Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources;
- Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels);
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation including SuDS and mitigation of any hydrogeomorphic impacts on the unnamed waterbody, and on groundwater supplies;
- A transport assessment is required;
- Hydrological assessment and consultation with local IDB over changes to waterbodies;
- Design to include suitable arrangements for avoidance of impacts on nearby public right of way and / or suitable diversions put in place;
- Archaeological field evaluation and survey of impacts on historic assets and suitable mitigation strategy to be put in place;
- Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust;
- Appropriate restoration scheme using opportunities for habitat creation.

While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain (for instance in relation to landscape). The Plan's decision has been to discount this site.

MJP39 – Quarry House, West Tanfield

Site Name	Site MJP39 (Quarry House, West Tanfield, Harrogate)
Current Use	Current Use: agriculture
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 13.5 ha
Proposed life of site	Proposed life of site: 3 years from 2017 /18
Notes	Notes: Proposed new quarry. Restoration unknown at present.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Assumptions: Timescales are unknown and therefore for the purposes of this assessment it is assumed that extraction would cease at the end of the medium term and that during the long term the site would be restored.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and	Proximity of international / national and local designations and key features Natura 2000: 8.5km west - North Pennine Moors SPA/SAC; SSSI: 2 SSSIs within 5km - Ripon Parks 2.55km south-east and Hack Fall Wood 3.2km west; SINC: 16 SINCs (former/current/proposed) within 2km. Of these 4 lie within 1km - Nosterfield LNR (ratified SINC, SE27-04) 300m north, West Tanfield Quarry (ratified SINC, SE27-08) 640m north-east, Green Lane Nosterfield (deleted SINC, SE27-11) 940m north-east, Westwood (Haw Leas)	✓		✓	✓	-	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
improve habitat connectivity	<p>Disused Railway (ratified SINC, SE27-29) 530m west; LNR: Nosterfield circa 325m north.</p> <p>UK Priority Habitats: None on site or immediately adjacent. Note deciduous woodland 30m to SW and 130m to east and traditional orchards 116m north and 160m east.</p> <p>Site visit: Hedgerows noted along the west side of the site adjacent to the A6108, stand-alone trees in north east corner of site, arable (wheat) fields present on site. Eco networks: circa 30% of site lies within NY10 River Ure Corridor Living Landscape. Site entirely within R16 Ure regional GI corridor.</p> <p>Local effects There may be a hydrological link with Nosterfield LNR. A hydrological study is required in order to assess potential impact on flood water movement & whether development would impact on the river. It could also consider the effects of flooding on biodiversity.</p> <p>Protected species are likely to be associated with the boundaries of the site including foraging bats, otter, badger, nesting birds and brown hare. Habitats include riparian woodland and the river itself. There is a small risk of invasive species affecting this site as regular flooding increases their spread, especially Himalayan balsam & <i>Crassula helmsii</i>, which are both an existing on-going management issue in the area, so a potential long-term management issue here as well.</p> <p>There is the opportunity through restoration to create priority habitats of high quality, but this depends on the depth of extraction and final levels. It is considered that wet woodland and creating a riparian buffer would be priorities here. Restoration plans are however currently unknown but likely to be mainly to water.</p> <p>There may be a cumulative negative impact due to disturbance from minerals extraction as there are/have been several large sites in this area (e.g. Nosterfield Quarry, West Tanfield Quarry and landfill, Ripon Quarry (at North Stainley)). There is also another Joint Plan submission across the river (MJP38). There is also the opportunity at this site for cumulative positive impacts if a high quality restoration and long term management plan can be secured.</p>						+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>In summary, in the short term ecological impacts are considered to be minor negative – though much depends on protected species present and impacts to the river and nearby SSSI. Impacts are uncertain in the medium term as site restoration plans are currently unknown; however it is considered that impacts are likely to range from neutral to minor positive.</p> <p>Biodiversity needs to be examined in context of a strategic overview of the area. There are restoration opportunities if it becomes a wetland as this could be a ‘stepping stone’ to Nosterfield Local Nature Reserve, but it needs to be shallow water to be beneficial. As the site is relatively small it is considered to be on the low side of restoration viability, but with potential for wetland, wet grassland or wet woodland.</p> <p>MOD airfield safeguarding may be an issue.</p> <p>Plan level / regional / wider effects This site is unlikely to result in a significant effect upon an SAC / SPA. It is considered that the site has the potential to impact upon Ripon Parks SSSI (e.g. through water discharges) as a hydrological link exists. Protection of the River Ure will need careful consideration.</p>							
2. To enhance or maintain water quality	<p>Proximity of water quality / quantity receptors Site lies within an existing groundwater NVZ and new surface water NVZ. Not within or adjacent to a Source Protection Zone. Humber RBMP: Site in SUNO (Swale, Ure, Nidd, Ouse) Management area. The ‘Ure from Thornton Steward Beck to River Skell’ RBMP</p>	✓	✓	✓		-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and improve efficiency of water use	<p>waterbody is adjacent to the site to the north and east. Current ecological status is moderate. Overall status is moderate. Objective is good by 2027. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new water extraction licenses may be more restricted.</p> <p>Local effects Extracting may expose groundwater to risks such as fuel spills or changes to levels but these are likely to be avoidable through good site practices. However, without mitigation there are minor risks. No information is provided as to whether working would take place above or below the saturated zone, though it is next to a river so work below the water table is considered a possibility. As the site is also very close to the Ure, discharges to surface water may potentially act as a pathway for on-site pollutants or increases in turbidity / nutrient loading; so appropriate management measures would be needed to put in place. There may also be hydrogeomorphological impacts on the river. Restoration may have impacts of its own on hydrology, so hydrological survey is needed.</p> <p>Plan level / regional / wider effects None noted.</p>						?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The A1(M) lies around 7km east of the site and proximity to market, particularly York, Leeds and Harrogate is good. Access: Exact location of access not finalised, but would be on western side of site onto the A6108 approximately mid-way along the western boundary of site in a position to best suit the sight lines coming out onto the A6108. HGV Vehicles: 20 two way movements. Light Vehicles: 20 two way movements</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 13.65km east (Thirsk Station) / No railheads within 10km; Strategic / Major Road: A1(M) is around 7km east (longer via the road network). A6108 is a timber freight route; Canal / Freight waterway: Although the site is next to the River Ure, the nearest navigable waterway is the Ripon Canal 8.6km south.</p> <p>Local effects This site will generate a relatively small amount of traffic and the Highways Assessment concludes that HGV movement is acceptable onto the A6108. However, works will be required to improve the existing road A6108 and extend existing footway / street lighting to improve safety at the site access.</p> <p>The opportunities for sustainable transport seem limited, but will need to be determined by a traffic assessment and/or travel plan identifying travel modes beyond the local highway network.</p> <p>Plan level / regional / wider effects None noted.</p>					-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors No AQMAs within 2km. The site does not lie within a hazardous substances consent consultation zone. A number of residential receptors lie within 1km of this site - West Tanfield lies 100m north-west and individual properties include Tanfield Mill 100m east, Quarry House 600m south-west, Sleningford Park 900m south, Home Farm 950m south.</p> <p>Local effects The village of West Tanfield and a number of individual properties lie in very close proximity to the site and may be within range of dust. The output of this site would also lead to sufficient lorries to transport 100,000 tonnes of sand and gravel per year. Though these may combine with other lorries depending on routes taken to the A1(M) with potential low level dust and particulate pollution impacts. Due to the location of the site within 100m of the nearest settlement, impacts in relation to this objective are considered to be moderate negative during the operation of the site although appropriate mitigation is likely to reduce the magnitude of this effect (though the proximity of West Tanfield means that at the level of this SA we cannot reduce the effect to a minor negative).</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	m-	0	0
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC Grade 2; Greenfield site - No known risk factors for contaminated land.</p> <p>Local effects 13.5 hectares of Best and Most Versatile land would be lost and it is uncertain whether this site would be restored to agricultural land.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		-	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Site visit noted hedgerows along the west side of the site adjacent to the A6108 and stand-alone trees in north east corner of site.</p> <p>Local effects There is likely to be no significant loss of carbon storage potential from on-site habitats.</p> <p>Plan level / regional / wider effects This site would produce 100,000 tonnes of sand and gravel per year (up to 300,000 tonnes in total), which would generate a relatively small amount of CO₂, to extract and transport. However, as this site has a slightly longer journey to the A1(M) than some other sites (though has good access to Ripon) it is judged to have a minor negative (and permanent) addition to atmospheric CO₂.</p>	✓		✓		-	-	-
7. To respond and adapt to the effects of	<p>Proximity of factors relevant to the adaptive capacity⁴⁸ of a site About 90% of the site is in Flood Zone 3 and a further 7% in Flood Zone 2. In terms of surface water flooding circa 2% of site is at high risk of surface water flooding (1 in 30), 1% is at medium risk (1 in 100) and 1% at low risk (1 in 1000). Eco networks: About</p>		✓	✓		-	+	+

⁴⁸ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
climate change	<p>30% of site lies within NY10 River Ure Corridor Living Landscape. CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The majority of the site is located in Flood Zone 3. In terms of surface water flooding around 4% of the site is vulnerable (low, medium and high risk combined). Although the site is water compatible, the high risk of flooding to this site mandates the need for emergency planning. In the longer term there is the potential for this site to offer flood storage to the wider catchment (positive but uncertain as restoration is not confirmed). The element of standoff from the river corridor at this site means it is not likely to hinder species movements along an ecological corridor (River Ure Living Landscapes Corridor NY10). In the longer term, the site could offer some future potential to enhance ecological networks in the area and thus species' adaptive capacity.</p> <p>Plan level / regional / wider effects None noted.</p>						?	?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that up to 300,000 tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue until such time as extraction ceases.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations, but this is considered to be of negligible significance given the size of the site.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural	<p><u>Proximity of historic environment receptors</u> Conservation Areas: West Tanfield Conservation Area 60m north. Registered Parks and Gardens: Hackfall (Grade I, ID 1,000,130) 3.2km south-west, Norton Conyers (Grade II, ID 1,001,068) 4km south-east; Registered Battlefields: none within 5km; World Heritage Sites: None within 5km.</p> <p>Scheduled Monuments: 920m north-east - 'Earth circles, cursus, pit alignments and burial sites near Nosterfield and Thornborough, including Centre Hill round barrow' (ID 1,004,912), 60m west - 'Tanfield</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
heritage and character	<p>Bridge' (ID- 1,003,681), 250m west - 'Marmion Tower (former gatehouse of Tanfield Castle fortified manor)' (ID 1,011,669), 1.2km south-east - 'East Tanfield deserted medieval village' (ID 1,016,260), 1.6km north-east - 'Three round barrows at Three Hills 500m north east of Camp House' (ID 1,015,764), 1.7km east - 'Round barrow 425m north west of Rushwood Hall' (ID 1,016,262); Listed buildings: 20 listed buildings within 1km (18 Grade II, 2 Grade I), mainly concentrated in West Tanfield circa 100m to the west. Nearest 70m North - Prospect House (Grade II, NHLE no. 1,150,782).</p> <p>Named designed landscapes: two unnamed areas within 2km circa. 500m south and 1.4km SW. HLC broad type - Enclosed land / HLC Type – Modern improved fields. The proposed allocation site lies within an area of high archaeological significance and sensitivity, which contains a number of prehistoric monuments and deposits that have been the subject of recent investigation and publication. This Thornborough Henges landscape is considered to be internationally significant.</p> <p>In addition to the designated, scheduled monuments, within the vicinity of the proposed allocation site, undesignated archaeology includes evidence revealed by previous archaeological fieldwork and metal detecting, comprising a number of finds of early prehistoric date, including Mesolithic and Neolithic flints, and Bronze Age arrowheads and tools. Such activity occurs along the margins of former wetland areas.</p> <p>Topographic modelling of this landscape suggests that the allocation site lies in an area of higher ground which would have been dry during the Neolithic and Bronze Age, and subsequently has high archaeological potential.</p> <p>Local effects The HLC type of this area is modern improved fields. As the allocation site is a smaller part of a much larger area of similar character type, of which the legibility is fragmentary, the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area. However, it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There is high archaeological potential for the survival of archaeological remains within the site from the earlier prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the permanent loss of these archaeological remains if the site is extracted without mitigation. While to some degree this would be mitigated by the Joint Plan development management policies, the historic context and small scale of the site makes this uncertain.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out. The site is also within the setting of Thornborough Henges which may be deleterious to this important scheduled monument.</p> <p>Additionally, the site is very close to the West Tanfield Conservation Area, which would likely lead to significant adverse impacts on its setting.</p> <p><u>Plan level / regional / wider effects</u> The scheduled monuments associated with Thornborough Henges potentially affected by this site are considered nationally significant.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Park: Not within 10km; AONB: Nidderdale 1.6km west; Heritage Coast: none within 10km; Inheritance Tax Exemption (ITE) Land: 4km south-east is Norton Conyers ITE.</p> <p>NCA: Southern Magnesian Limestone; NY&Y LCA: Landscape Character Type 24: River Floodplain; Harrogate LCA- 98% of site in Area 79 River Ure and West Tanfield Farmland, 2% Area 78 River Ure Corridor.</p> <p>Tranquillity: Undisturbed; Urban intrusion: Undisturbed on CPRE map (2007) although in practice it is affected by the A6018 corridor and the extensive historic and current quarrying to the north. Light pollution: Low – 48 on a scale of 1-255, with 1 representing maximum darkness (CPRE 2000).</p> <p>Local effects There are no predicted effects on any nationally or locally designated landscapes. However, the site lies very close to West Tanfield Conservation Area, and close to the listed Tanfield Bridge from which a scenic view of the village, associated cluster of listed buildings, and River Ure can be obtained. There would be a significant negative impact on the approach, and there could also be views into the site from properties in West Tanfield and local rights of way. There could be cumulative effects on townscape and setting with site MJP38 (Mill Cottages, West Tanfield) which lies on the north side of the river. The Quarry Hill caravan site has permission to expand which heightens the consideration of the impact on local public rights of way further.</p> <p>The landscape/townscape is locally sensitive, and extraction on this site would permanently alter its setting, with unacceptable short term effects. The site is close to Sleningford Park (undesignated historic designed landscape). It is also within the setting of Thornborough Henges. The wider landscape has suffered extensive disturbance from mineral extraction so there would be cumulative effects, particularly with MJP38.</p> <p>The site is partly screened, but there are views from the A6108, to which the site is close. The site may also be visible from Tanfield Bridge viewpoint and West Tanfield Conservation Area so it is likely to increase visual intrusion.</p> <p>Working the site would give limited or no benefits in landscape terms. The perception is that West Tanfield</p>	✓	✓	✓		--	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>has had limited disturbance, whereas to north-east there is more apparent disturbance and this would introduce that to the area south of the river.</p> <p>Effects are major negative in the short term. Beyond that restoration is unknown, though a wet restoration scheme seems likely. The landscape and townscape are both locally sensitive, and extraction on this site would permanently alter its setting.</p> <p>Plan level / regional / wider effects None noted.</p>							
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth Site is relatively close to the A1(M) giving access to York, Leeds and Teesside.</p> <p>Local effects This site would ultimately result in 300,000 tonnes of sand and gravel being made available to the market. This would make a contribution to the building sector by helping to boost supply of a key building material. There may also be a severance and economic impact on Sleningford Mill caravan site and West Tanfield, as the Ripon Rowel route provides an access route from the caravan site to West Tanfield (pub, shop, etc.). This would have an economic effect that could last beyond the duration of the quarry.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	+	?	?
						-		

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD area is Kirkby Malzeard - not in most deprived 20%. West Tanfield is the nearest settlement 100m north-west.</p> <p><u>Local effects</u> This is a relatively small site that would provide limited jobs, so positive effects are limited. Proximity of the site to tourist attractions such as Thornborough Henge and Sleningford Watermill Caravan and Camping Park may have a minor negative impact on tourism in the area. The medium and longer term is more uncertain and depends on restoration.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓		-	?	?
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Footpath 15.102/4/1 runs through the site and Ripon Rowel (long distance regional route) footpath runs along the river along the east and north boundary of the site. Footpath 15.102/3/1 starts 110m south of the site. An area of draft common land, 'Courby and the Green', lies 220m west. No Registered Village Greens listed within 500m. Green Infrastructure (GI): Site entirely within R16 Ure regional GI corridor.</p> <p><u>Local effects</u> Footpath 15.102/4/1 would need to be re-routed as a result of the development. The impact on the Ripon Rowel may be more difficult to mitigate. It may not be possible to divert this route given the size of this site (potentially there could be a buffer between quarrying and the route, though it may be difficult to achieve). The site boundary appears to go right up to the River Ure which is a key attribute of the Ripon Rowel. There may also be a severance and an economic impact on Sleningford Mill caravan site, as the Rowel route provides an access route to West. These footpaths and other routes in close proximity to the site may experience amenity impacts such as dust, noise and visual impacts without mitigation. As this site is in a GI corridor there is potential to restore it to GI. In the medium and longer term the situation is likely to remain negative if the site is restored to water and the Ripon Rowel is not restored to its original location, though this is uncertain,</p> <p><u>Plan level / regional / wider effects</u> The Ripon Rowel is considered along with local effects above.</p>		✓	✓		--	--	--
						?	?	

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> There is a school 400m north west in West Tanfield. No hospitals, clinics or health centres within 1km. Nearest settlement is West Tanfield 100m north west.</p> <p><u>Local effects</u> West Tanfield lies in very close proximity to this site and residential receptors could, without mitigation, be within range of noise and dust impacts, while local roads could get busier. As noted above, the site may also obstruct two local and regional rights of way. Further assessment is needed. Effects could be cumulative with MP38.</p> <p><u>Plan level / regional / wider effects</u> Considered along with local effects above.</p>		✓	✓	✓	--	?	?
						?		
16. To minimise flood risk and reduce the impact of flooding	<p><u>Proximity to flood zones</u> About 90% of the site is in Flood Zone 3 and a further 7% in Flood Zone 2. In terms of surface water flooding circa 2% of site is at high risk of surface water flooding (1 in 30), 1% is at medium risk (1 in 100) and 1% at low risk (1 in 1000).</p> <p><u>Local effects</u> As a sand and gravel site this site is water compatible. However, because a substantial part of the site is at risk of flooding appropriate safety measures, such as an emergency plan, will need to be adopted. This site, if restored for water storage, could provide some minor benefits in terms of flood storage. A flood risk assessment is required.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓		-	+	+
							?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p><u>Proximity to factors relevant to the needs of a changing population</u> The site does not conflict with any known allocations in other plans.</p> <p><u>Local effects</u> Considered together with plan wide effects below.</p> <p><u>Plan level / regional / wider effects</u> The site would make a small contribution to self-sufficiency in the supply of sand and gravel.</p>		✓	✓		+	+	0

Cumulative / Synergistic effects ⁴⁹	
Planning context	West Tanfield is the nearest settlement 100m north-west. West Tanfield is in the Hambleton LDF and is a 'Service Village' (Hambleton policy CP6: ' <i>Outside the Service Centre development will be supported in the designated Service Villages..... at a level appropriate to the needs of the local communities and within the defined development limits...</i> '). No allocations are within 200m of this site.
Other Minerals and Waste Joint Plan Sites	Other potential allocations lie within 2km - MJP38 70m east, MJP14 1.6km south-east, MJP10 1.6km south and MJP10 at 1.7km south. A little further afield lie MJP57, WJP10 at 2.9km south, MJP06 2.4km north-east, and MJP07 2.3km north.
Historic minerals and waste sites	Within 2km there are numerous historic minerals applications to the immediate north of the site associated with Nosterfield and West Tanfield quarries, including historic landfilling at West Tanfield. Nosterfield is also an active sand and gravel site. To the south east (from 1.8 km away) minerals extraction has historically taken place, and still does take place, at Ripon Quarry. A dormant sand and gravel site (Haw Wood) lies 1.8km south west.
Biodiversity	There may be cumulative negative impacts on local species, but cumulative positive impacts for biodiversity through restoration.
Water	Site MJP38 lies 70m east, in close proximity to the River Ure. It is possible that these two sites in combination could result in significant hydrological impacts upon the river.
Health and wellbeing	Due to the proximity to West Tanfield and other residential receptors, cumulative negative impacts may result in relation to wellbeing, health and safety of local communities, particularly in relation to increase traffic levels.

⁴⁹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Flooding	There is the potential for a cumulative positive impact in relation to flooding should this site and other nearby quarries be restored to water in the floodplain.
Landscape / townscape	There could be cumulative effects on the townscape and setting of West Tanfield with site MJP38 (Mill Cottages, West Tanfield) which lies on the north side of the river.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular protected species and invasive species and possible hydrology /hydrogeomorphology issues, including examination of any potential impact on Ripon Parks SSSI. • Include a buffer between site and river bank • Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources. • Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels) • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate and mitigation of any hydrogeomorphic impacts on the river, and on groundwater supplies. • Design to include suitable arrangements for avoidance of impacts on nearby public right of way / possible temporary diversions. • Archaeological field evaluation and suitable mitigation strategy to be put in place and assessment of impacts on the setting / significance of historic receptors; • Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan. • Appropriate arrangements for control of and mitigation of the effects of noise, dust; • Appropriate restoration scheme using opportunities for habitat creation and links to ecological networks, compatible with airfield safeguarding <p>While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain. The Plan's decision has been to discount this site.</p>	

MJP41 – Scalibar Farm, Knaresborough

Site Name	Site MJP41 (Scalibar Farm, Wetherby Road, Plompton, Knaresborough, Harrogate)
Current Use	Current Use: agriculture
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sand and gravel
Size	Size: 29.4 ha
Proposed life of site	Proposed life of site: Unknown at present
Notes	Notes: Proposed new quarry. Restoration unknown at present.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Assumptions: the lifetime of the site is currently unknown however for the purposes of this assessment, it has been assumed that the site will be operational in the short and medium term and has been restored in the long term.

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and	Proximity of international / national and local designations and key features Natura 2000: 4.5km south-east- Kirk Deighton SAC; SSSI: 4 SSSIs within 5km - Birkham Wood 1km west, Hay-a-Park 2.3km north, Newsome Bridge Quarry 2.7km south and Kirk Deighton 4.4km south; SINC: Braham Wood SINC (SE35-09) is 0.97km away. Grimbold Crag (SE35 - 13) potential SINC is 0.87km away.	✓	✓	✓		-	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
improve habitat connectivity	<p>Priority Habitat: Deciduous woodland adjacent to north and west of site.</p> <p>Ancient Woodland: None within site however Scalibar Wood lies circa 13m SW. Site visit: arable farmland, trees and hedgerows on site.</p> <p>Eco networks: Area of core EHN overlaps slightly with the site to the north (circa 3% of site) and a further area overlaps slightly with the site to the west (circa 2% of site); GI: Site entirely within R8 Nidd regional GI corridor. Living Landscapes: Site entirely within NY26 Knaresborough Nidd Woodlands.</p> <p>Local Effects There would be no impact to SINCs. Based on the habitats present protected species that could be affected include badger, bats (if mature trees affected), and nesting birds.</p> <p>Potential impacts to Scalibar Wood⁵⁰ should be investigated, e.g. from possible de-watering at the site if needed, dust deposition etc. Care would also be required in developing the site access as would not wish an impact if the road needed widening to accommodate the access</p> <p>In summary, there would be possible impacts to protected species in the short term. Although the life of the site is unknown, there are opportunities to enhance biodiversity in the area through appropriate site restoration though no details are yet known.</p> <p>If shallow worked then this site may have restoration potential with opportunities for wetland creation, or for woodland or scrubby grassland if it is a dry site.</p> <p>Plan level / regional / wider effects Considering source - pathway - receptor for this site it is considered that there would be no significant effect on any Natura 2000 site. There would, however, be potential impacts to Birkham Wood SSSI from increased traffic along A658 which need to be considered (primarily if road upgrades are required to accommodate increased traffic loads as well as dust impacts from lorries).</p>					?	?	?
	⁵⁰ Shown as ASNW on the ancient woodland inventory							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Overall, when mitigation is applied negative effects are likely to be low level, and in the long term could be positive, though there is some uncertainty over issues such as dust and hydrology which would require further investigation.							
2. To enhance or maintain water quality and improve efficiency of water use	<p><u>Proximity of water quality / quantity receptors</u> Site in a Nitrate Vulnerable Zone (groundwater); no groundwater source protection zones onsite or adjacent; In Humber RBMP. Nearest section of river is 'River Nidd from Birstwith to Crimple Beck' (current ecological quality- moderate potential, current chemical quality- does not require assessment) at 0 m distance (runs along the northern and eastern boundary of the site). NO RBMP lakes. Groundwater: site lies in SUNO Magnesian Limestone (current quantitative quality- good, current chemical quality- good).</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p><u>Local effects</u> Extracting may expose groundwater to risks such as fuel spills but these are likely to be mitigated through good site practices. However, inevitably there would be small scale residual risk. No information is provided as to whether working would take place above or below the saturated zone, though it is next to a river so wet working or the need to dewater is considered a possibility. As the site is adjacent to the Nidd discharges to surface water any dewatering here may potentially act as a pathway for on-site pollutants or increases in turbidity / nutrient loading, so appropriate management measures would need to be put in place. Dewatering of the site may also modify groundwater levels which may impact on flow rates in the river, or levels elsewhere. In the long term it might also impact on the geomorphology of the river. Restoration may have impacts of its own on hydrology, so hydrological survey is needed.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p> <p>Overall, effects on this objective remain uncertain.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The A1(M) lies around 4km east of the site and proximity to market, particularly York, Leeds and Harrogate is good. Access: Location unknown at present, but site abuts the 6164 Wetherby Road; HGV Vehicles: 72 -121 (estimate); Light Vehicles: 10 -18 (estimate); PROW: The site is not affected by a registered public right of way.</p> <p>Rail: 2.73km north-west is Knaresborough Station / Railhead: 27.3km south-west; Strategic Road: A658 770m north / A1(M) 4km east (direct) Canal / Freight waterway: Ouse is 11.3km east.</p> <p>Local effects The number of HGVs is potentially quite high and could combine with traffic from Knaresborough / MJP35 traffic. Access is acceptable onto the Wetherby Road. However, works will be required to enable the junction and alignment improvements are likely to be required to the existing highway (B6164). A transport assessment is required. Sustainable travel is unlikely to be possible.</p> <p>A routing agreement would be preferred ensuring vehicles travel to the A59 in most instances.</p> <p>Plan level / regional / wider effects None noted.</p> <p>Effects are most likely to be up to minor negative with routine mitigation in place, though significant uncertainty is noted until a transport assessment is conducted.</p>		✓		✓	?	-	-
							?	?
4. To protect	Proximity of air quality receptors No AQMAs within 2km (the Knaresborough AQMA is 2.9km NW).		✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and improve air quality	<p>The site does not lie within a Hazardous Substances Consultation Zone. A number of settlements and individual properties lie within 1km of the site (including Knaresborough 450m north-west, Goldsborough 650m north-east, Little Ribston 950m south-east. Properties- 70m and 140m west of site, Tickhill Farm 150m west, Scalibar Farm 220m west, Low Grange Farm 970m west, Goldsborough Mill Farm 540m north-west).</p> <p>Local effects The site lies in close proximity to a number of residential receptors which may experience air quality impacts in relation to dust from the site. Should wet working take place at the site dust impacts would be less likely, aside from during initial soil stripping and during restoration. Minor negative impacts are predicted during site construction, operation and restoration, with uncertainty noted depending on whether the site would be wet worked. Long term impacts are uncertain as site restoration plans are currently unknown.</p> <p>Traffic may also be generated from this site, though it is unlikely that it be routed anywhere near the Knaresborough AQMA, though at a low level would add to background levels of pollution (not rising to significant levels)</p> <p>Plan level / regional / wider effects None noted.</p>							?
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC: 98% of site in Grade 3, 2% in Grade 2. Contaminated land: Greenfield site / not applicable.</p> <p>Local effects Up to 29.4 ha of possible best and most versatile land (although it is not clear whether the site is 3a or 3b) could be lost. Some of this may be restored (although this is uncertain at present).</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		m-	m-	m-
								?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Priority Habitat: Deciduous woodland adjacent to north and west of site. Site visit noted arable farmland, hedgerows along the western boundary, remnant hedgerows between middle and northern fields and standalone trees.</p> <p>Local effects No significant loss of carbon storage potential from on-site habitats is predicted.</p> <p>Plan level / regional / wider effects Although the annual output of the site is currently unknown, ultimately it is estimated up to 2 million tonnes of sand and gravel would be transported from the site over its operational lifetime. The A1(M) lies approximately 4km east of the site and access to market, particularly York, Leeds and Harrogate is good.</p> <p>Overall, impacts are considered to be minor negative.</p>	✓		✓		-	-	-
7. To respond and adapt to the effects of climate	<p>Proximity of factors relevant to the adaptive capacity of a site Circa 35% of the site is in Flood Zone 3 and a further 15% is in Flood Zone 2. Around 5% of the site is at high risk of surface water flooding (1 in 30), another 5% is at medium risk (1 in 100) and 10% at low risk (1 in 1000). CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted. Area of core EHN overlaps slightly with the site to the north (circa 3% of site) and a further area overlaps</p>		✓	✓		0	0	m+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>slightly with the site to the west (circa 2% of site); Living Landscapes: Site entirely within NY26 Knaresborough Nidd Woodlands.</p> <p>Local effects Flooding is considered insignificant to minor negative as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. The site is considered unlikely to impair the movement of species vulnerable to climate changes. In the longer term restoration to nature conservation could provide an opportunity to deliver climate change adaptation (e.g. habitat refuge) or restoration to water may be beneficial in terms of reducing flood risk elsewhere in the catchment. These impacts are uncertain however as restoration plans are unknown.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change.</p>					-	-	?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that up to 2 million tonnes of virgin minerals would be extracted over the lifetime of the site which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue during the operational lifetime of the site.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations, but this is considered to be of low / negligible significance.</p>					0	0	0
10. To conserve or enhance the historic	<p><u>Proximity of historic environment receptors</u> Goldsborough (DNY973) Conservation Area lies 550m north-east and Knaresborough Conservation Area lies 850m north-west; Registered Parks and Gardens: Ribston Hall (Grade II, ID 1,001,071) 850m south-east, Plumpton Rocks (Grade II*, ID 1,000,535) 1.7km south-west, Rudding Park (Grade II, ID 1,000,403) 3.6km south-west, The Long Walk, Knaresborough</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
environment and its setting, cultural heritage and character	<p>(Grade II, ID 1,000,132) 2.3km north-west, Allerton Park (Grade II, 1,000,402) 4km north-east; Registered battlefields: None within 5km; World Heritage sites: None within 5km.</p> <p>Scheduled Monuments: 'St Roberts Cave medieval hermitage, 90m north of Plumpton Mill Farm' (ID 1,015,540) 1.1km north-west, 'Medieval cross base south west of St Mary the Virgin's Church' (ID 1,019,079) 1.1km north-east; Listed buildings: 8 Listed Buildings within 1km (all Grade II), mostly concentrated in Goldsborough. Nearest to site- Mile post near entrance to Tickhill Farm (NHLE - 1,191,578) 80m west.</p> <p>Named Designed Landscapes: Goldsborough Park 350m north-east, Ribston Park 800m east, Plompton Park 1.4km south-west.</p> <p>HLC Broad type - Enclosed land / HLC Type – Modern improved fields. Undesignated archaeology in this area includes evidence from aerial photographic transcriptions of a landscape containing a number of sites and features of probable later prehistoric and Romano-British date. These are located in the fields to the immediate east, south and west of the proposed allocation site, and within the northern part of the allocation site. They comprise a number of rectilinear enclosures, suggestive of settlement sites with associated trackways and boundary features, and some small pits. There is also a possible Roman villa site to the south west and a number of metal detected finds of Romano-British date in the immediate area, which suggest high potential for remains to be present within the allocation site. Evidence of former medieval fields systems has also been recorded within the allocation site, which may be masking earlier features.</p> <p>Local effects The HLC type of this area is modern improved fields. As the allocation site is a smaller part of a much larger area of similar character type, of which the legibility is fragmentary, the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area. However, it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 20% of the HLC project area has been identified as modern improved fields, this effect is not considered to be significant.</p> <p>Plan level / regional / wider effects None noted</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There are, however, potentially negative effects on the setting of Goldsborough Hall, which is Grade II*, and its associated designed landscape, which is around 0.5km away at its nearest point, and also on Goldsborough Conservation Area which lies under 0.75km to the north east, with its cluster of listed buildings</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and it is assumed that allocating this site would be likely to cause the permanent loss of these archaeological remains if the site is extracted without mitigation. However, in practice archaeological remains could be recorded and where necessary preserved.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks, AONBs: None within 10km; Heritage Coast: None within 10km; ITE: None within 5km in plan area (may be areas outside); Local designations- Harrogate Borough Council Special Landscape Area 1km west at closest point.</p> <p>NCA: Southern Magnesian Limestone; NY&Y LCA: Area 24- River Floodplain; District LCA: Harrogate LCA Area 66- Nidd corridor at Goldsborough.</p> <p>Tranquillity: disturbed. Urban intrusion: Disturbed by proximity to settlement, roads and overhead electricity transmission line, though in practice the area feels rural - CPRE (2007). Light pollution: Moderate - ranges from 74 at the southern end to 141 at the northern end which is closer to Knaresborough (CPRE 2000)</p> <p>Local effects There are no impacts on nationally or locally designated landscapes. There are, however, potentially negative effects on the setting of Goldsborough Hall, which is Grade II*, and its associated designed landscape, which is around 0.5km away at its nearest point, and also on Goldsborough Conservation Area which lies under 0.75km to the north east, with its cluster of listed buildings. Potential inter-visibility would need to be assessed. The site is highly visible to the east of the B6164 approach to Knaresborough from the south and to Little Ribston to the south. The potential impact on Knaresborough</p>	✓	✓	✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Conservation Area, approximately 1km to the north west, would also need to be assessed, but it is likely to be insignificant.</p> <p>The site is shown in the NY&Y LCA as being within the River Nidd floodplain but in practice only part is within the EA floodplain, the remainder being sloping land which in the Harrogate LCA is within a character area named North Wetherby Arable Rolling Land.</p> <p>As the site straddles two local landscape character types, there could be local negative effects on the distinctiveness of each. There is also a need to maintain distinctiveness of the 2 character areas.</p> <p>There has been previous sand and gravel extraction in a loop of the River Nidd to the south east of Knaresborough, at Grimbald Quarry, which is now an industrial estate with a negative landscape impact. There are unlikely to be any cumulative visual effects with other quarries, but the question of incremental urbanisation of the countryside arises. The pylons already present are visually intrusive, but this is a completely reversible impact. The site is low-lying but would be prominent within this section of the River Nidd valley. In terms of screening, the site is largely open to view from the B6164, and would be open to view from the eastern side of the Nidd valley where the Knaresborough Round walk passes along a minor road and PROWs. It is potentially visible from some properties in Goldsborough, 0.75km distant. This site could add to the increasingly disturbed character to the south of Knaresborough resulting in permanent change. There is potential to add woodland to screen site from views from the east. Vehicle movements will not affect the character of the surrounding area.</p> <p>This assessment is tentative as the lifespan of the quarry is not known, nor is any restoration information provided. Integration into the wider landscape would depend on the final landform. The pylons and road may constrain quarrying and result in an unsatisfactory scheme. Woodland along the river corridor might be desirable restoration to give setting to watercourse.</p> <p><u>Plan level / regional / wider effects.</u> None noted.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The A1(M) lies around 4km east of the site and proximity to market, particularly York, Leeds and Harrogate is good.</p> <p>Local effects This site would ultimately result in up to 2 million tonnes of sand and gravel being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight.</p> <p>Plan level / regional / wider effects As local effects above.</p>		✓	✓	✓	m+	m+	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability In Ribston IMD Area. Not in most deprived 20%. Knaresborough is the closest settlement 450m north-west and Goldsborough also lies 650m north-east.</p> <p>Local effects Some job opportunities would arise from this site, and while the site would provide a source of sand and gravel which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. Impacts are therefore considered to be neutral in relation to this objective. Opportunities exist following restoration for the site to boost tourism in the area should a recreational use be implemented.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
14. To provide	<p>Proximity to recreation, leisure and learning receptors Footpath 15.46/5/1 runs 80m north-east of the</p>		✓	✓		0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
opportunities to enable recreation, leisure and learning	<p>site, Knaresborough Round runs 180m east of the site, Bridleway 15.46/4/1 runs 300m north of the site. No common land or village greens identified within 500m.</p> <p>Local effects Although there would be no direct impacts on rights of way, it is considered that users of nearby rights of way may experience minor visual, noise and dust impacts as a result of the allocation. Impacts are therefore considered to be negligible to minor negative during the operational lifetime of the site.</p> <p>There may be an opportunity to improve access along the river through restoration.</p> <p>Plan level / regional / wider effects None noted.</p>					-	-	
15. To protect	Proximity to population / community receptors / factors relevant to health and wellbeing A school		✓	✓	✓	0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
and improve the wellbeing, health and safety of local communities	<p>lies 900m north-east of the site. No hospitals, clinics or health centres within 1km. Nearest settlements are Knaresborough 450m north-west, Goldsborough 650m north-east and Little Ribston 950m south-east. Nearby properties- 70m and 140m west of site, Tickhill Farm 150m west, Scalibar Farm 220m west, Low Grange Farm 970m west, Goldsborough Mill Farm 540m north-west.</p> <p>Local effects There are scattered buildings and settlements around this site which may be within range of noise and dust impacts, particularly as soil is stripped or re-profiled (if wet-worked dust may lessen, though some operations such as drying may also generate dust). The site is also likely to result in increased levels of traffic on local roads surrounding the site, a possible health and safety risk. Restoration may bring some wellbeing benefits (although this is currently uncertain as site restoration plans are unknown).</p> <p>An overhead power line crosses the edge of the site which will require consultation with the National Grid.</p> <p>Plan level / regional / wider effects</p> <p>In the main, standard practice mitigation is likely to reduce effects to a negligible to minor negative level.</p>					-	-	
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Circa 35% of the site is in Flood Zone 3 and a further 15% is in Flood Zone 2. Around 5% of the site is at high risk of surface water flooding (1 in 30); another 5% is at medium risk (1 in 100) and 10% at low risk (1 in 1000).</p> <p>Local effects Flooding is considered insignificant to minor negative as sand and gravel extraction is considered water compatible, though workers on site would need emergency planning in place for severe flood events. In the longer term, restoration to water in the floodplain may be beneficial in terms of reducing risk elsewhere in the catchment. A flood risk assessment would be required.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans. A National Grid overhead line passes through the site and it is likely that this would need to be re-routed as a result of the development.</p> <p>Local effects Considered together with plan wide effects below.</p> <p>Plan level / regional / wider effects The site would make a significant contribution to self-sufficiency in the supply of sand and gravel and may also support markets outside of the Plan area.</p>		✓	✓		m+	m+	m+

Cumulative / Synergistic effects ⁵¹	
Planning context	Knaresborough is the closest settlement 450m north-west and Goldsborough also lies 650m north-east. Knaresborough is a Group A settlement in Harrogate's Core Strategy (main focus of growth).
Other Minerals and Waste Joint Plan Sites	None within 2km.
Historic minerals and waste sites	Grimbald Quarry (extraction) granted 1950s (now an industrial estate) lies 730m to the north west, while Grimbald Quarry (also 1950s extraction) lies slightly further north-west at 1.4km. A historic landfill site called 'Land West of Wetherby Road is 650m north-west. A waste transfer station (Greystones Aggregates and Recycling) is 1.3km north. A small historic quarry application (Hopperton Quarry) is 1.8km north-east, and a historic landfill site at Plompton Hall Farm is 1.9km west
Landscape Impacts	In landscape terms there may be some on-going incremental urbanisation of the countryside that this site would add to (in combination with local pylons and the industrial estate that is now on Grimbald Quarry).
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any	

⁵¹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular protected species and possible dust and hydrology issues on nearby Scalibar Wood, and dust impact on Birkham Wood.
- Suitable arrangements for avoiding any potential risk to overhead power line
- Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources.
- Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels)
- Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate and mitigation of any hydrogeomorphic impacts on the river, and on groundwater supplies.
- Design to include suitable arrangements for avoidance of impacts on nearby public right of way.
- Archaeological field evaluation and suitable mitigation strategy to be put in place;
- Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust;
- Appropriate restoration scheme using opportunities for habitat creation

While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain (for instance in relation to landscape). The Plan's decision has been to discount this site.

MJP51 – Great Givendale, Ripon

Site Name	MJP51 Great Givendale, Ripon, HG4 5AD
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel
Size	13.04
Proposed life of site	Anticipated to be on completion of adjacent site (2020 – 2026) with processing at existing Ripon City gravel site
Notes	Proposed new quarry. Possible restoration: Agriculture

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p><u>Proximity of international / national and local designations and key features</u> Natura 2000: 12km west-North Pennine Moors SPA/SAC; SSSI: 2.63km S - Bishop Monkton Ings SSSI / 2.33km W - Quarry Moor; SINC: Nearest SINC 600 metres to west (SE3-07 - Ripon Canal). SE36 -15 (Nicholson's Lagoons) also nearby 0.68km to north west. Possible functional connectivity via floodplain.</p> <p>Priority Habitats: Deciduous woodland patches immediately to north and south (where there is a tiny overlap). Long strip of deciduous woodland 60m from west of site (runs parallel to entire western boundary). Ancient woodland: none.</p>	✓	✓	✓	✓	0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors NVZ Groundwater; Source Protection Zone: Not in Source Protection Zone; RBMP: Nearest water body at 0m West is 'River Ure from River Skell to River Swale' - current eco quality - moderate potential - current chemical quality 'does not require assessment / at risk. No RBMP lakes. Groundwater: SUNO Magnesian Limestone - quantitative quality good / chemical quality good / at risk.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects As processing will be done off site water impacts during operation will be lessened somewhat. However, this site will still expose groundwater to potential contamination from fuel spills or leachate from stored overburden (this is likely to be mitigated through good site practices). Similarly effects on groundwater levels due to dewatering (if this occurs) and possible withdrawal of water from the River Ure could occur, though without processing it seems more likely that any discharge from dewatering operations to the Ure will be clean discharge. The site is not in a source protection zone so that would lessen the sensitivity of the groundwater receptor. Restoration may continue to have an effect on water quality as overburden is moved and possibly eroded. Hydrological impacts would need to be assessed.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	-	-	0
						?	?	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors Site is reasonably accessible to the A1(M) giving reasonably good access to York, Leeds and Teesside, and very close to Ripon. Access: Confirmed that access would be via the bailey bridge at the Sailing Club which is currently being used to transport the mineral from the existing permission on the east side of the River Ure to the existing Ripon City Quarry plant site and material would then go via the existing quarry access onto the B6265. No access from east side of River Ure is proposed.</p> <p>HGV Vehicles: 158; Light Vehicles: 50. Net change in daily two-way trip generations: light vehicles: 0; HGVs: 0. Traffic assessment rating: yellow.</p> <p>PROW: None on site and none interfere with access (see also objective 14).</p> <p>Rail: Standard gauge railway 11.5km south. Nearest Station is Knaresborough - 16.8km south-west. No railheads within 10km; Strategic Road: A61 is 2.4km west; Canal / Freight waterway: Ripon Canal is 500 m west. Ouse (River) adjacent. No wharves within 10km.</p> <p>Local effects Vehicles would route via Ripon City Gravel Site, which would handle the material from this site. This would, indirectly, amount to a continuation of existing impacts (though it is scored in this appraisal, as the</p>		✓		✓	--	--	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>baseline may otherwise be expected to reduce in terms of lorry transport if this site were not allocated).</p> <p>According to the Joint Plan traffic assessment access is via the B6265, east of which lies the Local Access Roads which subsequently provide access to the A1(M), This route is constrained by a bridge 200m to the east of the site. To the west the B6265 links to the A61 Ripon Bypass. Around 30% of HGV movements are predicted to be to the east with 70% of movements to the west. Traffic levels are around 8,000 vehicles (15% of which are HGVs) per day on the B6255. In this context impacts from this site are of relatively low significance, particularly as they are a continuation of current traffic from the site (though these impacts would have been expected to cease without this site). The potential for indirect traffic generation across the bridge means that a negative effect is recorded under this scenario.</p> <p>More recently the proposal has revised the route vehicles take, such that traffic would now be expected to route via an access route to the B6265 on the same side of the river as the quarry proposal. This is considered unacceptable as this access route is not suitable for HGVs without major improvements to Carriage Lane and junction improvements on Skelton Lane and there are also issues with HGVs using the B6265 bridge over the river Ure to access markets to the west.</p> <p>The Highways Assessment notes that passenger transport issues will require additional facilities / service provision as determined in a traffic assessment and / or travel plan.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					?	?	

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors No Hazardous Substances Consent Sites or AQMAs within 2km; Group of buildings to east at 50m. Low farm 450m north. Bridge Hewick (village) at 750m north. Race course 400m west. Sailing club 460m south. Givendale Grange is 810m south west and Little Givendale is 1.2km west. Littlethorpe settlement is 900m west.</p> <p>Local effects Dust is most likely to impact on the group of buildings which are c50m to the west of this site and possibly in the line of prevailing winds. More distant receptors may occasionally experience elevated levels of dust though it will be for a dust survey to rule in or out any significant impacts. The adjacent Bank Close and Morrell's woods may also experience dust deposition, though these habitats are not particularly sensitive to dust. Dust is most likely to occur during soil stripping and restoration phases if the site is wet worked</p> <p>Lorries would need to cross the site and the river to reach Ripon City Quarry Site, (as vehicles would not go directly from the site). Although dust from these lorries could be generated, it is expected that extant on-site controls would ensure this is below significant levels (as evidenced by the previous Ripon City Quarry Environmental Statement⁵²). Beyond that traffic is expected to be of relatively low significance in relation to the current traffic levels, but it would still generate a small amount of air pollution additional to that traffic. This is only likely to affect relatively few receptors.</p> <p>Plan level / regional / wider effects None noted.</p> <p>Overall effects are thought to be minor negative in the short and medium term.</p>		✓	✓		-	-	0
5. To use soil and land efficiently and safeguard or enhance their	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC): 60% Grade 3 / 40% Grade 2. Contaminated land: Greenfield site. No known risk factors.</p> <p>Local effects It is possible that 13.04 ha of best and most versatile land could be lost. This would be a</p>		✓	✓		-	-	0

⁵² SLR, 2008. Environmental Statement for an Extension to Ripon City Quarry, Ripon North Yorkshire [URL: <https://onlineplanningregister.northyorks.gov.uk/register/PlanAppDisp.aspx?recno=5539>]

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
quality	temporary effect as the site is planned to be restored to agriculture. Plan level / regional / wider effects None noted.							
6. Reduce the causes of climate change	Proximity of factors relevant to exacerbating climate change Deciduous woodland patches immediately to north and south (where there is a tiny overlap). Hedgerows on site. Local effects The loss of on-site habitats with carbon storage potential is not considered to be significant. Plan level / regional / wider effects Extraction close to processing is likely to be beneficial in terms of reducing carbon emissions. However, ultimately material from this quarry will have to reach a market. At an annual output of 100,000 tonnes and a total output of up to 600,000 tonnes this will generate a significant number of lorries that will ultimately drive to key markets (though the site is relatively close to the A1(M)).		✓		✓	-	-	0
7. To respond	Proximity of factors relevant to the adaptive capacity⁵³ of a site Flooding: Whole site in Flood Zone 3.		✓	✓	✓	-	-	+

⁵³ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
and adapt to the effects of climate change	<p>Surface Water Flooding: c 10% at 1/1000 risk, c 5% at 1/100 risk, c 3% at 1/30 risk. CFMP: Ouse CFMP/ Middle Ure unit / policy 3; CAMS: SUNO CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted. Living Landscapes: circa 70% of site in NY10 River Ure Corridor.</p> <p>Local effects Although site is water compatible, the high risk of flooding to this site suggests the need for emergency planning. In the longer term there is the potential for these sites to offer flood storage to the wider catchment. However, this is not seen as a particular priority as the site lies in CFMP Policy Unit 3 ('areas of low to moderate flood risk where we are generally managing existing flood risk effectively'⁵⁴). Ecological networks are unlikely to be affected due to these sites not disrupting significant parts of the corridors. However, restoration in the long term would strengthen networks.</p> <p>Plan level / regional / wider effects None noted.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. However, this impact can only be considered at the plan level rather than in relation to an individual site. All that can be said here is that up to 600,000 tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue until such time as extraction ceases.</p> <p>Plan level / regional / wider effects Considered at a local level above.</p>	✓			✓	-	-	0

⁵⁴ Citation needed

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified</p> <p><u>Local effects</u> The site would not specifically deal with waste. No impacts identified.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin sand and gravel and reducing the need to recycle sand and gravel from other locations, but this is considered to be of low, negligible significance.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> Conservation areas: None within 1km; Registered Parks and Gardens: Newby Hall (Grade II*, ID 1,001,067) 1km south-east, Studley Royal (Grade I, ID 1,000,410) 3.5km west; Registered Battlefields: None within 5km; World Heritage Sites: Studley Royal Park including the ruins of Fountains Abbey (ID 1,000,094) 4.3km west (but site outside of buffer zone); Scheduled Monuments: None within 2km; Listed buildings: 5 Listed Buildings within 1km (all Grade II), nearest 670m north - Hewick Bridge over River Ure; Named designed landscapes (from pre validated dataset derived from HLC): Unnamed (HNY9542) 930m south-east, Sharrow Hall 1.2km north, Bellwood Hall 1.8km west, Copt Hewick House 2km north-east.</p> <p>HLC Broad type - Enclosed land / HLC Type – part piecemeal enclosure & part modern improved fields.</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks: Not within 10km; AONBs: Nidderdale 4.4km west; Heritage Coast: Not within 10km; ITE: Newby Hall is 1.7km south-east; Locally Protected Landscape: 0.68km north is Harrogate Special Landscape Area, 3.17km west is another Harrogate Special Landscape Area; NCA: Southern Magnesian Limestone; Green Belt: No.</p> <p>NYLCA: 24 River floodplain. This has high visual sensitivity due to open / flat landform; high ecological sensitivity due to patchwork of habitats; high landscape and cultural sensitivity due to lots of historic assets and 'dynamic landscape pattern of narrow river corridors'. District LCA: Area 75 Ure Corridor (Ripon to Newby Reach).</p> <p>Intrusion: Disturbed. Urban intrusion: Shown as disturbed on the CPRE map (2007) because of proximity to Ripon, Ripon Racecourse, existing quarry, and busy roads including the B6265. However, visually the site is very rural in nature, sheltered and enclosed by flood banks and vegetation growing alongside the river. Light pollution: Moderate - 102-123 on a scale of 1-255, with 1 representing maximum darkness (CPRE 2000)</p> <p>Local effects This site is unlikely to affect the setting of designated landscapes and there are no settlements close to the site. However, This site lies within the River Ure floodplain, and is a continuation of historic and current efforts to extract sand and gravel from the floodplain to the south east of Ripon changing the geomorphology of the area. Until recently, all the extraction was on the west side of the river, but there is now extraction under way on the west site towards Newby Hall. The character of the floodplain is dominated by</p>	✓		✓		-	-	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>mineral working, and once restored will be largely a re-created landscape of wetlands and new habitats, rather than a farmed landscape.</p> <p>The context of this site is Ripon's rural-urban fringe, but enclosed parts of the river corridor can be perceived as relatively tranquil. However, it is not considered that vehicle movements from this site will significantly change the character of the area. The site is unlikely to be visible from the fringes of Ripon given intervening treed and distance.</p> <p>The lifespan of this site may be very short term, judging by the rate at which existing areas are quarried.</p> <p>Restoration at this site might help address Ripon's open space deficit.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>						?	

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is reasonably accessible to the A1(M) giving reasonably good access to York, Leeds and Teesside, and very close to Ripon.</p> <p><u>Local effects</u> This site would ultimately result in 500,000 to 600,000 tonnes of sand and gravel being made available to the market. This would make a modest contribution to the building sector by helping to boost supply of a key building material (as well as supporting limited freight jobs).</p> <p><u>Plan level / regional / wider effects</u> As local effects above.</p>		✓	✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> Part of site in Bishop Monkton IMD area - not in worst 20%. Part of site Newby - not in worst 20%. Bridge Hewick (village) at 750m north. Littlethorpe settlement is 900m west. Ripon is c1.4km north-west.</p> <p><u>Local effects</u> The site would support a very small number of jobs in quarrying and freight leading to minor negligible to positive impacts in the short and possibly the medium term. Whilst the site would provide a source of sand and gravel which could aid future development, it is considered that the immediate settlements are unlikely to directly benefit in any significant way.</p> <p><u>Plan level / regional / wider effects</u> Considered together with local effects above.</p>		✓	✓		+	+	0
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Footpath 15.17/7/1 is 90m north-west. 15.45/1/1 Footpath is 160m north-east. No common land or village greens within 500m.</p> <p><u>Local effects</u> There may be minor temporary noise, dust and visual impact to the footpaths north east and north west of the site (which are likely to be of local importance, though due to the distance to these footpaths they would not experience major effects), though routine measures and the development management policies are likely to control many of these impacts. In the longer term, these impacts will cease.</p> <p>Any restoration to biodiversity may be quite isolated in terms of access. Recreational opportunities may come</p>		✓	✓		-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>through the Yorkshire Wildlife Trust reserve on the other side of river. However, the permissive path connections to a bridge over the river may be lost through this site (minor negative). Long term benefits could come through linking to Harrogate GI SPD (e.g. by providing access).</p> <p>Plan level / regional / wider effects None noted.</p>							
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Group of buildings to east at 50m. Low Farm 450m north. Bridge Hewick (village) at 750m north. Race course 400m west. Sailing club 460m south. Littlethorpe settlement is 900m west. No schools, hospitals or health centres or clinics within 1km.</p> <p>Local effects Dust and noise is most likely to impact on the group of buildings which are c50m to the west of this site and possibly in the line of prevailing winds, though development management measures in the plan are likely to require controls (though we have noted up to minor negative effects due to the closeness of these receptors). More distant receptors may occasionally experience elevated levels of dust and noise though it will be for dust and noise surveys to rule in or out any significant impacts. Dust is most likely to occur during soil stripping and restoration phases if the site is wet worked.</p> <p>Accidents may also increase depending on routes taken by traffic. A particular pinch point may be the bridge across the Ure to the north of the site if this is used. Traffic is expected to be of relatively low significance in relation to the current traffic levels on the B6265, but it would still generate small amounts of air pollution (fumes and dust) additional to that traffic (which we have rated as being a minor negative effect as it is outside of any AQMAs, is a continuation of existing levels of traffic, and would affect relatively few receptors).</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	0
16. To minimise flood	<p>Proximity to flood zones Flooding: Whole site in Flood Zone 3. Surface Water Flooding: c 10% at 1/1000 risk,</p>		✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
risk and reduce the impact of flooding	<p>c 5% at 1/100 risk, c 3% at 1/30 risk. CFMP: Ouse CFMP/ Middle Ure unit / policy 3.</p> <p>Local effects Although site is water compatible, the high risk of flooding to this site suggests the need for emergency planning. In the longer term there is the potential for these sites to offer flood storage to the wider catchment. However, this is not seen as a particular priority as the site lies in CFMP Policy Unit 3 (areas of low to moderate flood risk where we are generally managing existing flood risk effectively). A Flood Risk Assessment is required.</p> <p>Plan level / regional / wider effects Considered together with local effects above.</p>							?
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects Considered together with plan wide effects below.</p> <p>Plan level / regional / wider effects The site would make a modest contribution to self-sufficiency in the supply of limestone and may also support markets outside of the Plan area.</p>		✓	✓		+	+	0
Cumulative / Synergistic effects ⁵⁵								
Planning context	<p>Bridge Hewick (village) is 750m north. Littlethorpe settlement is 900m west. Ripon is c1.4km north-west. Ripon is a Group A Settlement in the Harrogate Core Strategy (the focus of growth in the District). Harrogate's District Local Plan 2001 retains its policies map, which shows the site falling within the policy R10 area. This is the River Ure and Ouse Navigation policy (which is not deleted). This requires recreational uses to be safeguarded and new recreational facilities to be restricted to quiet informal uses.</p>							

⁵⁵ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Other Minerals and Waste Joint Plan Sites	None noted within 2km.
Historic minerals and waste sites	Previous minerals and waste planning applications: Site adjacent to River Ure extraction site and within circa 100m from Ripon City Quarry extraction site. A further historic application associated with Ripon City Quarry is 334m west, while applications at Ripon Racecourse for extraction lie 650m west. Littlethorpe potteries active clay site is 1.3km south-west. Dallamires Crescent Household Waste Recycling Site is 1.76km north-west. KK Anderson Metal Recyclers Ltd is 1.73km north-west. Landfill: Nearest is sewage works 1.5km north-west. This is part of a cluster of 7 sites to the northwest between 1.5 and 4.4km away.
Landscape Impacts	This site lies within the River Ure floodplain, and is a continuation of historic and current efforts to extract sand and gravel from the floodplain to the south east of Ripon changing the geomorphology of the area. Until recently, all the extraction was on the west side of the river, but there is now extraction under way on the west site towards Newby Hall. The character of the floodplain is dominated by mineral working, and once restored will be largely a re-created landscape of wetlands and new habitats, rather than a farmed landscape.
Biodiversity Impacts	In terms of biodiversity, the site is on the opposite side of the River Ure from a reed bed which is being managed for biodiversity. The impacts depend on the way the site would be worked, its depth & how it would be restored. Ideally it should be reed bed, or if not suitable for that, a wet woodland area.
Limitations / data gaps	
No significant data gaps. More detailed assessment may be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues • Design to mitigate impact on best and most versatile agricultural land • Design of development and landscaping of site to mitigate impact on: heritage assets (archaeological remains, unscheduled moat, property and medieval village and the canal), local landscape features and their respective settings and users of recreation facilities and rights of way in area • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate • Maintenance of access to Ripon City Quarry • Appropriate arrangements for control of and mitigation of the effects of noise and dust, etc. • Appropriate restoration scheme using opportunities for habitat creation and recreation (including areas of reed bed or wet woodland) • Appropriate traffic management to control any negative effects from traffic on the Hewick Bridge 	
The Plan's decision has been to discount this site.	

MJP15 – Blubberhouses Quarry, West of Harrogate

Site Name	MJP15 Blubberhouses Quarry, Kex Gill Moor, Blubberhouses, Harrogate
Current Use	Mothballed quarry
Nature of Planning Proposal	Extension of time to allow continuation of extraction of silica sand from existing site
Size	83.43 of which 38.66 is proposed for extraction
Proposed life of site	25 years
Notes	Moorland and wet bog; Site is existing quarry which is subject to a current application (NY/2011/0465/73) to extend the period of time for working the site until 2036

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

This assessment considers that the effects of this possible allocation would be dependent on the outcome of the current application, which is as yet undetermined, but that the application would run from a point in time within the Plan period for a period of 25 years.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features SAC/SPA Ramsar: North Pennine Moors SAC/SPA adjacent to site to the west, north and south, 8km south- South Pennine Moors SAC/SPA; SSSI: West Nidderdale, Bardon and Blubberhouses Moors SSSI is immediately adjacent to the north, west and south of the site; SINC: 3 SINC: SE15-05 Thruscross Reservoir (1.1km east) and SE15-01 West End Marsh (0.53 SE) and SE15-07 Timble Ings (1.95km) are all within 2km.</p> <p>IBA: IBA (North Pennine Moors) immediately adjacent; UK Priority Habitats: Site surrounded by / contains a mix of upland heathland and blanket bog. An area of upland flushes, fens and swamps lies 50m to the south; Ancient woodland: no. 95% of site within EHN. 50% of this is core mire fen and bog / 50% core heathland (max 0.8km movement envelopes). Living Landscape: Site almost entirely within NY24 Nidderdale Moors- Key habitats- upland heath, blanket bog, dry and wet heath, woodland.</p>	✓	✓	✓	✓	--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Local Effects Considered together with plan level effects below.</p> <p>Plan level / regional / wider effects It is considered that there will be an impact upon the SAC / SPA. A HRA will need to be prepared for the current application (which is for a variation of a condition to extend working at the site) – however this has not yet been completed and submitted to Natural England.</p> <p>Information that supports the current planning application shows that protected species on site include breeding and wintering birds. Habitats include: managed heath and dry modified bog; acid grassland; marshy grassland; open water; running water; plantation woodland; bare/disturbed ground and tall ruderal, all of which may impacted by this allocation without mitigation. There is some plantation woodland on site. There is also wider biodiversity in this area, including bats and great crested newts.</p> <p>Loss of land and traffic disturbance to breeding birds are key issues, as are issues of monitoring and long term management and the moving of a road (construction impacts).</p> <p>There are also issues in relation to peat (which supports habitats such as blanket bog) and how this is stored and re-used. Because there is uncertainty about the depth of peat a better understanding of this needs to inform restoration. Long term storage of peat is an issue as it rapidly degrades and it may be difficult to maintain peat in a sufficient state to allow habitats found now to be re-instated. Therefore given that this area is already of high ecological value any restoration is only likely to mitigate any impacts.</p> <p>In summary, effects depend on the outcome of the application and associated HRA and the degree to which they can be mitigated. In the long term restoration should offset impacts from operational phase – potential for some minor benefits depending on restoration and management to be agreed.</p> <p>There may also be the potential for in combination effects with road improvements on the A59, which involves a realignment of the road at Kex Gill. While details of the route are not yet available, it is a commitment in LTP4, which includes a commitment to satisfying the Habitats Regulations should a scheme be progressed. Should this site be advanced at a point in time when the details of the A59 improvement are known this should be taken into account in project level Habitats Regulations Assessment.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors NVZ: Not in NVZ; Source Protection Zone : Not in or adjacent to Source Protection Zone; RBMP: Stream adjacent to northern boundary flows into 'Washburn source to Spinksburn Beck' current Eco quality- moderate potential / chemical quality 'does not require assessment' / at risk. Overall potential: moderate. Objective: Good by 2027. Downstream of this lies RBMP Lake 'Fewston Reservoir' current Eco quality- moderate potential / chemical quality 'does not require assessment' / at risk. Overall potential: moderate. Status objective: good by 2027. Groundwater: Wharfe and Lower Ouse Millstone Grit and Carboniferous limestone. Current Quantitative quality - good / current chemical quality - poor / Probably at risk. Objective: good qualitative status by 2015 and good chemical status by 2027. CAMS: Wharfe and Lower Ouse CAMS: surface water resources available at less than 30% of the time. New extraction licenses are likely to be restricted⁵⁶.</p> <p>Local Effects The current planning application for the site includes a hydrological analysis which describes that dewatering will take place in the following way: "Dewatered water pumped from the quarry workings will be pumped to the silt settlement lagoons along with water from the mineral washing process so that the suspended solids can settle out before the water is discharged off site....the SAC area to the west of the site is dependent upon surface water rather than groundwater for the maintenance of the blanket bog and upland heath vegetation. We can therefore conclude that the quarry dewatering will have no detrimental</p>	✓	✓	✓	✓	0	0	0

⁵⁶ Water may still be available for further licensing at high flows with appropriate restrictions. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>impact upon the surface water conditions required for these habitats. Furthermore, the surface water conditions will be maintained by culverting surface drainage below the proposed diversion of Kex Gill road⁵⁷. The Environment Agency have stated that this assessment will only be acceptable if further details are provided of the dewatering scheme's impact on nearby water users and the water environment, and any proposed mitigation measures. As with other assessments it is assumed that there could be a potential risk from fuel / fluid spills on site, though such impacts are expected to be readily mitigated. However, until the application is decided and conditions discharged these impacts would remain uncertain. Uncertainty over water availability is also noted, which will need to be resolved through the licensing regime if water extraction is needed.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					?	?	?

⁵⁷ Hanson Quarry Products Europe Ltd, Proposed Renewal of Time Limited Planning Permission Reference C6/105/6A/PA at Blubberhouses Silica Sand Quarry, Kex Gill, North Yorkshire: Environmental Statement.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The site is close to the A59, though markets for silica sand may well be national. Access: confirmed to be the existing Blubberhouses Quarry access onto Kex Gill Road (unclassified U2478) approximately 155m from junction with A59, with use of the existing conveyor tunnel under Kex Gill Road to area north-west of Kex Gill Road. Note: the development does involve the proposed movement of Kex Gill Road as the quarrying progresses, see application details NY/2011/0465/73; HGV Vehicles: 80 two way trips per day; Light Vehicles: 46 two way trips per day.</p> <p>PROW: This site is affected by a registered public right of way which must be kept clear of any obstruction until such time as an alternate route has been provided and confirmed by order.</p> <p>Rail: 16.5km east / Railhead: 45km south-east; Strategic Road: Site borders the A59 (a timber freight route); Canal / Freight waterway: 14.5km south Leeds to Liverpool canal.</p> <p>This is a remote location & so traffic impact (given the tendency of the A59 to landslips) is a concern.</p> <p>Local Effects The site will generate 80 two way HGV 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. A transport assessment will be needed (which will also confirm any sustainable travel opportunities). There are few significant settlements or junctions close by so effects are considered to be negligible to minor negative (in this assessment a precautionary minor negative assessment is used) on account of the minor works.</p> <p>The site is not expected to generate significant passenger transport demand.</p> <p>Plan level / regional / wider effects None noted.</p>		✓		✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors No Hazardous substances consent sites or AQMAs within 2km. Moorcock Hall 100m south. Burnt House is 430m north. Next nearest property Spittle Ings House circa 540m north. Occasional scattered buildings beyond that up to 1km.</p> <p>Local effects The Environmental Statement establishes that prevailing winds come from the south west and that the nearest residential property is Burnt House, which would be in the path of winds from the site only 6% of the time. Given the distance, impacts from dust are considered to be insignificant. Projected concentration of PM10 is also considered to significantly be below the Defra set significance threshold. The application also proposes a range of mitigation measures⁵⁸.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors ALC Grade 5. In terms of land stability site does not lie within or adjacent to a development high risk area though site is in a Coal Mining Reporting Area and appears to include a mine entry. A coal mining report would be required for property transaction and the conveyance process.</p> <p>Local effects No impacts on best and most versatile land or subsidence. Arguably in terms of land lost this land would have been lost under the original, now mothballed application, though only since the site has been mothballed has there been an opportunity for land to rest and be considered again in this assessment.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0

⁵⁸ Hanson Quarry Products Europe Ltd, Proposed Renewal of Time Limited Planning Permission Reference C6/105/6A/PA at Blubberhouses Silica Sand Quarry, Kex Gill, North Yorkshire: Environmental Statement.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Priority Habitats: Site surrounded by / contains a mix of upland heathland and blanket bog. An area of upland flushes, fens and swamps lies 50m to the south. Site visit: Woodland / copse, standalone trees and heathland / blanket bog on site.</p> <p>Local effects Peat to a depth of 50cm is found across the site with deeper peat in the centre. This represents a significant loss of a carbon sequestration resource. Although this will be stockpiled, without mitigation this is likely to degrade.</p> <p>Plan level / regional / wider effects Up to 250,000 tonnes of saleable silica sand product would also leave this remote site by road each year which would also generate considerable tonne/km loads and associated CO₂.</p>	✓	✓	✓	✓	--	--	--
7. To respond and adapt to the effects of	<p>Proximity of factors relevant to the adaptive capacity⁵⁹ of a site Flooding: site is in Flood Zone 1. Surface water flooding: c10% of site at 1/1000 risk, c3% at 1/30, c 1% 1/100 - spread across the site in</p>	✓	✓		✓	-	-	?

⁵⁹ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
climate change	<p>patches.</p> <p>Catchment Flood Management Plan: Ouse CFMP / River Washburn unit / Policy 6; Catchment Abstraction Management Strategy: Wharfe and Lower Ouse CAMS - Surface water resources available at less than 30% of the time. New extraction licenses are likely to be restricted⁶⁰</p> <p>Eco Networks: 95% of site within England Habitat Network (EHN). 50% of this is core mire fen and bog / 50% core heathland (max 0.8km movement envelopes). Living Landscape: Site almost entirely within NY24 Nidderdale Moors- Key habitats- upland heath, blanket bog, dry and wet heath, woodland.</p> <p>Local effects The Environmental Statement for the current site concludes there are no flooding issues on or off site⁶¹. However, arguably a large amount of land in an ecological network would be lost, but given the size of the network this is unlikely to block species movement, though it may or may not have impacts on the populations of species (which may be under further threat due to climate change) and diminish their habitat without mitigation. These impacts are unknown until the completion of a HRA report, but impacts are only likely to be reduced given the historic nature of this habitat (which takes many decades to form). Restoration may restore some degree of baseline conditions.</p> <p>Uncertainty over water availability is also noted, which will need to be resolved through the licensing regime if needed.</p> <p>Plan level / regional / wider effects Considered alongside local effects above.</p>					?	?	+

⁶⁰ Water may still be available for further licensing at high flows with appropriate restrictions. Water may be available if you can buy (known as licence trading) the amount equivalent to recently abstracted from an existing licence holder.

⁶¹ Hanson Quarry Products Europe Ltd, Proposed Renewal of Time Limited Planning Permission Reference C6/105/6A/PA at Blubberhouses Silica Sand Quarry, Kex Gill, North Yorkshire: Environmental Statement Section 3: Non-Technical Summary

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
8. To minimise the use of resources and encourage their re-use and safeguarding	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> Silica sand is a nationally important asset. Apart from glass cullet, for some specialist process there are currently no alternative resources for silica sand so although this is extraction of a finite resource, it should be set in that context. Industry arguably could do more to recycle and efficiently use existing silica sand, but there is little that the Joint Plan can do to address this.</p>	✓		✓		-	-	-
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing virgin silica sand and reducing the need to recycle silica sand, but this is considered to be of low / negligible significance.</p>					0	0	0
10. To conserve or enhance the	<p><u>Proximity of historic environment receptors</u> Conservation areas: None within 1km; Registered Parks and Gardens: None within 5km; Registered battlefields: None within 5km; World Heritage Sites: None within</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
historic environment and its setting, cultural heritage and character	<p>5km.</p> <p>Scheduled Monuments: None within 2km; Listed buildings: 5 Listed Buildings within 1km (all Grade II). Closest to site 'Mile post approx. 30 metres west of paradise' (NHLE no. 1,174,261) 350m south; Named designed landscapes (from pre validated dataset derived from HLC): None within 2km.</p> <p>HLC Broad type - Unenclosed land & partly extractive /HLC Type – Moorland & partly extractive sandstone.</p> <p>Undesignated archaeology in this area includes evidence for former lead mining, as well as a number of prehistoric finds, comprising of an axe, whetstone and quern, suggestive of prehistoric activity in the area.</p> <p>Local effects The HLC type of this area is a combination of moorland and extractive sandstone. It is considered that extraction could have a negative effect upon the moorland historic landscape character, which has a combination of complete & significant legibility in different areas of the site. There may also be impacts on listed buildings in the vicinity of this site, particularly the group of 4 listed buildings at Redshaw Hall.</p> <p>Plan level / regional / wider effects Arguably, however, as the site is mothballed this impact would ultimately have happened anyway. However, extraction has yet to take place over much of the allocation site. An application to extend the time period of working this mothballed site has been submitted and is yet to be determined. This considers that some land was not worked in the original proposals and would thus be lost under proposed new phases of working. Without mitigation this concludes that: “Based upon the frequency of Mesolithic sites in the surrounding landscape (including one excavated in about 1960 within the permission area) it is considered that the potential for the further Mesolithic sites within the proposed extraction area is very high and that therefore direct impacts of substantial harm are very likely”. Impacts on upstanding earthworks would be moderate. This assessment therefore considers that effects will be broadly similar and would at least be in line with the proposals if unmitigated. However, the current application has proposed a mitigation strategy for these effects so effects are considered to be reduced. Effects remain uncertain as discussions over the current application are on-going. Mesolithic sites are considered to be of at least regional significance.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p><u>Proximity of landscape / townscape receptors and summary of character</u> National Parks: Yorkshire Dales is 1.31km W; AONBs: Site is within Nidderdale AONB; Heritage Coast: Not within 10km; Inheritance Tax Exemption land (ITE): Bolton Abbey Estate ITE land borders northern edge of site. National Character Area (NCA): 70 % of site (western part) is in Yorkshire Dales NCA. Remaining eastern part is Pennine Dales Fringe NCA. Green Belt: No.</p> <p>North Yorkshire Landscape Character Assessment: 34. Gritstone High Moors and Fells - High visual sensitivity as a result of elevated, open nature of the landscape; High ecological sensitivity as a result of the distinctive patchwork of blanket bogs and heather moorland; High landscape and cultural sensitivity resulting from the predominantly intact landscape pattern of blocky gritstone outcrops, predominantly rural character and strong sense of remoteness and tranquillity throughout with associated dark night skies. District LCA: Most of site in 'upland moorland' category of Harrogate LCA. Small part within northern boundary is within Upper Washburn Valley. Small part on southern fringe of site within Washburn Valley.</p> <p>Intrusion: Undisturbed. Urban intrusion: Part of the quarry lies within the disturbed corridor of the A59, and part lies within landscape that is shown as undisturbed on the CPRE 2007 map. Light pollution: Low – 46</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>on a scale of 1-255, where 1 represents maximum darkness (CPRE, 2000).</p> <p>Local effects This site is within the Nidderdale AONB and is visible from the skyline. Distance views from Coldstones Cut and the National Park may be possible. However, the site already exists and it is apparent from Kex Gill Road that the landscape has been disturbed. Further working of the existing inactive quarry would intensify existing visual disturbance to the landscape and introduce noise. The area is very open and any changes could be visible from afar. However, the site is close to the A59 which is a corridor of noise and activity, so the change would not be substantial.</p> <p>The site is inactive, and the scale of future quarrying is not known, but the scores represent maximum impact due to the location within a sensitive and relatively tranquil landscape. In practice, impacts may be reduced. Effects of quarrying are irreversible, but much of the impact has already occurred, and only part of the site is proposed for future extraction.</p> <p>Impacts from transport will also affect character. Possible future impacts from improving connectivity on the A59 could combine with this site in the future (though there are currently no formal plans to do this).</p> <p>Plan level / regional / wider effects As noted above, this site is within the Nidderdale AONB and is visible from the skyline. Distance views from Coldstones Cut and the National Park may be possible.</p>					?	?	?
12. Achieve sustainable economic	<p>Proximity of factors relevant to sustainable economic growth The site is close to the A59, though markets for silica sand are national.</p>	✓		✓		++	++	++

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
growth and create and support jobs	<p>Local effects The site would support jobs.</p> <p>Plan level / regional / wider effects Silica sand is a nationally important mineral for glass making and foundry sand. This will help support a number of high value industries across the UK.</p>							0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Washburn - Not in worst 20%. Very small area of site <1% is Nidd Valley - Not in worst 20%. Blubberhouses is 2.1km east.</p> <p>Local effects Communities are relatively distant from this remote site. While the site may support a small amount of jobs, these may come from some considerable distance away.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
14. To provide opportunities to enable	<p>Proximity to recreation, leisure and learning receptors Footpath 15.14/3/1 crosses northern part of site. Footpath 15.14/4/1 runs adjacent to southern boundary of site. Bridleway 15.14/5/1 runs adjacent to south-east corner of site. Bridleway 15.14/17/1 runs along part of north-west boundary of the site. Footpath</p>		✓	✓	✓	m-	m-	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
recreation, leisure and learning	<p>14.134/16/1 lies 140m north. Footpath 13.134/12/1 lies 430m north; Site in draft common land / CROW Access land. More access land 330m north.</p> <p>Local effects The current application recognises that a footpath crosses the northern part of the site. While that application proposes liaison with user groups over the mitigation for this, as the diversion of a local route it would score minor negative without mitigation in this assessment. Impairment of views, noise and dust may affect users of the other adjacent routes and the occasional user of open access land for short periods and noise may be a factor on more distant routes. No identified noise receptors exceeded MPS2 thresholds in the Environmental Statement, though recreational users may suffer impairment of their recreational experience at relatively low levels of noise.</p> <p>Access land would also be cut off. Footpaths and open access land are an important element of recreation in the AONB.</p> <p>Without mitigation the overall effect is considered moderate negative until restoration.</p> <p>Plan level / regional / wider effects Footpaths and open access land are an important element of recreation in the AONB and the impacts on them from this site are described in local effects above.</p>							0
15. To protect and improve the wellbeing,	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Moorcock Hall 100m S. Burnt House is 430m north. Next nearest property Spittle Ings House circa 540 m north.</p>		✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
health and safety of local communities	<p>Occasional scattered buildings beyond that up to 1km. No schools or hospitals within 1km.</p> <p>Local effects The Environmental Statement establishes that prevailing winds come from the south west and that the nearest residential property is Burnt House, which would be in the path of winds from the site only 6% of the time. Given the distance impacts from dust are considered to be insignificant. Projected concentrations of PM10s are also considered to significantly be below the Defra set significance threshold. The application also proposes a range of mitigation measures⁶². Similarly noise levels are generally kept below MPS2 noise thresholds, except for one receptor, Redshaw Hall which experienced worst case scenario noise at equal to the MPS2 criteria of 44dB⁶³. This is interpreted as a minor negative effect in this assessment.</p> <p>Plan level / regional / wider effects None noted.</p>							?

⁶² Hanson Quarry Products Europe Ltd, Proposed Renewal of Time Limited Planning Permission Reference C6/105/6A/PA at Blubberhouses Silica Sand Quarry, Kex Gill, North Yorkshire: Environmental Statement.

⁶³ ibid

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Flooding: site is in Flood Zone 1. Surface water flooding: c10% of site at 1/1000 risk, c3% at 1/30, c 1% 1/100 - spread across the site in patches. Ouse CFMP / River Washburn unit/ Policy 6;</p> <p>Local effects The Environmental Statement for the current site concludes there are no flooding issues on or off site⁶⁴.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population This site does not conflict with any known allocations.</p> <p>Local effects None noted.</p> <p>Plan level / regional / wider effects Silica sand is a nationally important mineral for glass making and foundry sand. This will help support a number of high value industries across the UK which in turn will support population needs.</p>					+	+	+

⁶⁴ Hanson Quarry Products Europe Ltd, Proposed Renewal of Time Limited Planning Permission Reference C6/105/6A/PA at Blubberhouses Silica Sand Quarry, Kex Gill, North Yorkshire: Environmental Statement Section 3: Non-Technical Summary

Cumulative / Synergistic effects⁶⁵	
Planning context	Blubberhouses is 2.1km east. This is not in the Harrogate Settlement Hierarchy. Site contained within Washburn Valley granted application for 'borehole' - 1970s. A number of applications have occurred in the Coldstones Quarry area 6.72km north. Other small scale applications remotely scattered to the east of the site within 5km.
Other Minerals and Waste Joint Plan Sites	None within 2km
Biodiversity	No cumulative effects noted. It is possible there may be a cumulative effect on biodiversity from future improvements to the A59. However as this is not currently a funded proposal or within the planning system the SA has not scored this effect.
Landscape Impacts	No cumulative effects noted. It is possible there may be a cumulative effect on landscape from future improvements to the A59. However as this is not currently a funded proposal or within the planning system the SA has not scored this effect.
Limitations / data gaps	
More detailed assessment would be required to fully evaluate a number of effects, and it will be important that issues relating to biodiversity are resolved through Habitats Regulations Assessment. This is addressed at both the strategic level (in relation to this policy referring to this site) and is also being addressed to support the planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular protected species and satisfactory completion of an HRA • Hydrological assessment • Design to minimise the irreversible loss of high quality soil resources (peat). • Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels) • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as attenuation and SuDS as appropriate. • Design to include suitable arrangements for avoidance of impacts on / diversions for nearby public rights of way. • Archaeological field evaluation and consideration of impacts on the significance of historic designated assets (particularly nearby listed buildings) and suitable mitigation strategy to be put in place; • Design to include suitable arrangements for access and local roads, including an appropriate transport assessment. • Appropriate arrangements for control of and mitigation of the effects of noise, dust; • Appropriate restoration scheme using opportunities for habitat creation <p>While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain. The Plan's decision has been to discount this site.</p>	

⁶⁵ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

MJP32 – Barsneb Wood, Markington

Site Assessment Framework Template

Site Name	Site MJP32 (Barsneb Wood Quarry, Hob Green, Markington, Harrogate)
Current Use	Current Use: woodland and agriculture
Nature of Planning Proposal	Nature of Planning Proposal: Extraction of sandstone
Size	Size: 6 ha (2 areas 2 and 4 ha)
Proposed life of site	Proposed life of site: 16 years
Notes	Notes: Proposed new extraction site adjacent to former quarry. Restoration in south area: woodland on an inclined sloping shelf joining to existing contours on west side of site, with benched sides on the north, east and south sides linking to existing contours on those sides. North area: Restoration unknown at present.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features SAC/SPA: 8km north-west lies North Pennine Moors SPA/SAC; SSSI: 1 SSSI within 5km- Burton Leonard Lime Quarry 4.1km east; SINC: 5 SINC (former/current/proposed) within 2km. 2 of these lie within 1km of the site- Horse Hill Wood (deleted SINC, SE26-10) 107m north-east and Cayton Gill Marsh (ratified SINC, SE26-02) 350m south-east.</p> <p>Priority habitats: circa 20% of the site is covered by deciduous woodland. Site is also bordered to the north, west and south by areas of priority habitat (all deciduous woodland). Ancient Woodland: entire southern site area is covered in ancient woodland (PAWS⁶⁶). The northern area of the site is bordered by ancient woodland to the west and partly to the north.</p> <p>GI network: Entire site lies within D50 Markington and Ripon Railway GI corridor.</p> <p>England Habitat Network: entire southern site area covered by core England Habitat Network and circa 25% of northern area of site covered by core EHN.</p> <p>Site visit noted arable land, woodland/copse and hedgerows.</p> <p>Local effects There may be possible impacts to Cayton Gill Marsh SINC - further information would however be needed on traffic and access, dust deposition, and hydrological links to make this judgement.</p> <p>The southern area of this site is entirely ancient woodland (shown as PAWS on Ancient Woodland Inventory). Ancient Semi Natural Woodland (ASNW) also borders both the proposed southern and northern quarry areas. Protected species that could be affected include bats, nesting birds, and badger given the probable loss of habitats noted on site.</p> <p>There may be hydrological impacts on the nearby Cayton Gill Marsh SINC site to the south east.</p>	✓		✓	✓	--	--	--
⁶⁶ Plantation on	Ancient Woodland Site							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There may also be an impact on the PAWS in relation to accessing the site and taking materials out. There is some evidence of wind destruction of trees already near the site. Extraction from the agricultural area is preferable to extraction from the ancient woodland area (though a buffer would still be needed), which would represent loss of irreplaceable habitat. Dust deposition may also impact on PAWS ground flora depending on scale of quarry.</p> <p>The void likely to be formed would create issues including the steepness of the sides upon restoration.</p> <p>Site visit photos on this site show extensive stands of Himalayan balsam, which could be a management challenge.</p> <p>To summarise, loss of ancient woodland (PAWS) would cause a major negative effect. There are also probable negative impacts to adjacent areas of ASNW and potential negative impacts to a SINC and protected species. Negative effects endure to the long term as they represent a permanent loss of a national asset.</p> <p>A buffer would be needed between the edge of the northern site and the ancient woodland.</p> <p><u>Plan level / regional / wider effects</u> Considering source - pathway - receptor for this site it is considered that there would be no significant effect on any Natura 2000 site. Similarly, the assessment would consider it unlikely there would be an impact on SSSIs.</p>							

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p><u>Proximity of water quality / quantity receptors</u> Site is not within a nitrate vulnerable zone or a Source Protection Zone; Site is in Humber RBMP. Nearest section of river is 'Holbeck Catchment' 850m north (current ecological quality- good status, current chemical quality- does not require assessment). Groundwater: in SUNO Millstone Grit and Carboniferous Limestone: Current quantitative quality- good, current chemical quality- poor.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p><u>Local effects</u> Although it is not classed as an RBMP River, a minor watercourse Cayton Beck lies adjacent to the southern parcel of the site.</p> <p>As with all minerals sites there is a risk of water pollution from fuel spills, sedimentation etc. however, such occurrences should be readily avoidable through good site management.</p> <p>Overall the effect is predicted to be neutral in the short, medium and early long term as although there is some risk to water quality due to onsite operations, it is assumed that the relevant environmental permits and regulations will operate effectively. Following restoration, impacts are considered to be uncertain as site restoration plans are currently unknown.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
							?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The A1(M) lies around 7.2km east of the site and proximity to market, particularly York, Leeds and Harrogate is good; Access: to use a track from the MJP32 (south area) to the north edge of the proposed MJP32 (north area) and then the Redgate Lane (bridleway) northwards along the bridleway to join the Dole Bank (C263 road between Markington and Bishop Thornton) which is approximately 160m south-west of Hob Green.</p> <p>HGV Vehicles: 14 two way movements (estimate); Light Vehicles: 1-2 two way movements (estimate); PROW: The site is affected by a registered public right of way which must keep clear of any obstructions until such time as an alternative route has been provided and confirmed.</p> <p>Rail: nearest 8.2km S (Harrogate) / nearest railhead / wharf is 39km SE; Strategic / Major Road: A59 is 11.5km SE / A61 is 2.5km S; Canal / Freight waterway: 6.8km NE (Ure Navigation).</p> <p>Local effects Very low levels of traffic are expected from this site, which although remote from strategic transport routes is reasonably close to possible markets such as Harrogate.</p> <p>The Highways Assessment highlighted that the site does not have sufficient frontage to enable an access of acceptable standards to be formed onto the highway (currently the access is not suitable). Impacts on the highway network and the potential for sustainable transport will need to be determined by a traffic assessment. The site is not likely to generate significant passenger transport demand. Moderate negative.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓		m-	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Not within a hazardous substances consent consultation zone. Not within 2km of an AQMA. Applying the 1km buffer around a site for possible impacts advised by MPS2 shows that it is possible that a number of individual properties (including High Cayton 480m south-east, Barsneb 250m north, Shutt House 350m north-west, Thornton Moor Farm 440m south-west) are in range of dust.</p> <p>Local effects Dust could be a risk to a small number of residential receptors although some nearby properties are likely to be relatively well protected by intervening woodland. There could be possible dust impacts on adjacent priority woodland/ancient woodland. Traffic could lead to small numbers of HGV movements (25,000 tonnes to be transported annually). This is likely to be below the significance threshold. Impacts are considered to be negligible to minor negative.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	-
5. To use soil and land efficiently and	<p>Proximity of soil and land receptors Agricultural Land Classification: Northern parcel of land is Grade 3 and southern parcel is Grade 4; Greenfield site - no known risk factors in relation to contaminated land.</p>	✓	✓	✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
safeguard or enhance their quality	<p>Local effects The southern parcel of land does not constitute best and most versatile land. Up to 4 hectares of possible best and most versatile land could be lost as a result of the site (this is uncertain as it is not known if the site is Grade 3a or 3b). This would constitute a minor negative impact with some uncertainty. It is uncertain whether this would be a permanent loss of agricultural land as site restoration plans are currently unknown.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Southern site area is ancient woodland. Site visit noted the presence of hedgerows bordering the northern parcel of land.</p> <p>Local effects Development of the site would involve the loss of 2 hectares of ancient woodland and possibly some hedgerows, while dust impacts on surrounding ancient/priority woodland may reduce its productivity. However, these impacts are small scale and likely to be of low significance.</p> <p>Plan level / regional / wider effects The site is relatively small although a modest amount of traffic would be generated to transport 25,000 tonnes of sandstone from site per annum. The site lies circa 2km from the A61 and is proximal to markets in Harrogate and Leeds (6km and 22km respectively). It is considered that this site is likely to have a negligible to minor negative impact in relation to climate change.</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity⁶⁷ of a site Site is in Flood Zone 1. Around 2% of the site is at high risk of surface water flooding (1 in 30), a further 0.5% is at medium risk (1 in 100) and 3% is at low risk (1 in 1000). England Habitat Network (EHN): entire southern site area covered by core England Habitat Network and circa 25% of northern area of site covered by core EHN.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects Flooding is not a particular risk to this site. Although much of the site is core EHN, it is considered unlikely to significantly impair the movement of species vulnerable to climate change as much of the land surrounding the site still contains ancient woodland. Impacts are considered to be neutral.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change, though at a low level (insignificant in this assessment). Restoration of the northern part of the site is not known, so uncertainty is noted.</p>					0	0	0
								?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sandstone however it will constitute the extraction of up to 1 million tonnes of virgin minerals over the lifetime of the site which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue into the early long term and then cease.</p> <p>Plan level / regional / wider effects Considered at a local level.</p>	✓		✓		-	-	-

⁶⁷ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> The site may have an indirect negative impact on the prioritising the management of waste up the waste hierarchy as a result of providing sandstone and reducing the need to recycle sandstone from other locations, but this is considered to be of low / negligible significance.</p>					-	-	-
10. To conserve or enhance the	<p><u>Proximity of historic environment receptors</u> Conservation Areas: None within 1km; Registered Parks and Gardens: Ripley castle (Grade II, ID 1,000,401) 2km S, Studley Royal (Grade I, ID 1,000,410) 3.3km north at closest point; Registered Battlefields: none within 5km, World Heritage Sites: Studley Royal</p>	✓		✓		--	--	--

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
historic environment and its setting, cultural heritage and character	<p>including the ruins of Fountains Abbey 4.1km north (but site outside of buffer zone); Scheduled Monuments: Cistercian grange and medieval settlement at High Cayton (ID 1,020,747) 340m south-east, Wallerthwaite medieval village (ID 1,017,657) 1.6km north-east, Round barrow 250m west of Wallerthwaite (ID 1,017,658) 1.6km north-east; Listed Buildings: 7 listed buildings within 1km (all Grade II), Nearest 'barn and wheel house approx. 30m north west of the western farmhouse at High Cayton' (Grade II, ID 1,174,353) 470m south-east.</p> <p>Named Designed Landscape: Cayton Hall 1.7km east, Ripley Park 1.7km south, Ingerthorpe Grange 1.9km north.</p> <p>HLC Broad type - Enclosed land & woodland / HLC Type – Piecemeal enclosure & Ancient & semi-natural woodland</p> <p>Undesignated archaeology in this area includes evidence for a medieval chantry chapel and possible site of a nunnery to the north-west at Dole Bank, as well as former earthworks in the field to the south of Dole bank which may have been associated with the nunnery.</p> <p>There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the area, although current archaeological evidence for this is sparse as there has been limited archaeological fieldwork in this area to date.</p> <p>Local effects The HLC type of this area is a combination of piecemeal enclosure and ancient semi-natural woodland (ASNW). It is felt that there will be a negative impact upon historic landscape character. However, as the allocation site amounts to a smaller part of wider areas of similar historic landscape character - the woodland with complete legibility and the piecemeal enclosure with significant legibility – it is felt that the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area. Though because part of the area of ASNW is on the site of the former quarry and, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier quarry and field system, it is felt that the impact will be a minor negative. However, the site may be visible from the site of the medieval village of Cayton and Listed buildings at High Cayton, which is considered to be a significant effect.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>There is potential for the survival of archaeological remains within the site from the prehistoric period onwards so it is assumed that allocating this site would be likely to cause the permanent loss of these archaeological remains if the site is extracted without mitigation. However, archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out, and in practice archaeological remains may be recorded and where necessary preserved in line with the development management policies in the Joint Plan.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of	<p>Proximity of landscape / townscape receptors and summary of character National Parks: None within 10km; AONBs: Nidderdale AONB 2km W; Heritage Coast: None within 10km; ITE: None within 5km; District level landscape designations: Harrogate Borough Council Special Landscape Area 3.1km south-east.</p>	✓	✓	✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
landscapes and townscapes	<p>National Character Area: Pennine Dales Fringe; NY&Y LCA: Landscape Character Type 6 'Magnesian Limestone Ridge'; District LCA: - Harrogate LCA- Area 50 Brearton and Nidd Arable Farmland.</p> <p>Tranquillity: Undisturbed; Urban intrusion: undisturbed (CPRE 2007); Light pollution: Low – 51-54 on a scale of 1-255, with 1 representing maximum darkness (CPRE 2000)</p> <p>Local effects There are no predicted impacts on any designated landscapes and no settlements likely to be affected in terms of their setting. However, the site is in a small scale landscape with small field patterns & woodland along the Cayton Beck. This landscape is potentially highly sensitive to change. Visual intrusion could potentially increase as the site is at the top of a rounded hill, with potential for views from the south east of part of the site. Strategic rights of way / roads nearby afford high levels of sensitivity. Vehicle movements could affect character too as there are no other active quarries nearby and local roads are minor. However there are disused quarries locally.</p> <p>In terms of tranquillity, this is a very tranquil area with a lack of light pollution & disturbance– so disturbance may be significant.</p> <p>The site is partly screened: one part of the site is within woodland. The other has woodland to the west, with isolated blocks of woodland to the north east.</p> <p>The scores in this assessment take into account the skyline location, with potential for wider visibility, the adverse impact on tranquillity, and the loss of woodland, but also the existence of existing screening and distance from viewpoints. It is not known whether there would be benefits such as availability of local stone for repair of vernacular buildings.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is within 2km of the A61 giving good proximity to markets in Harrogate, Leeds and Bradford.</p> <p><u>Local effects</u> This site would ultimately result in 1 million tonnes of sandstone being made available to the market. This would make a significant contribution to the building sector by helping to boost supply of a key building material. It would also directly support jobs in extraction and freight. In the long term conditions would return to the baseline.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓		m+	m+	m+
								0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD Area is Bishop Monkton. This is not in most deprived 20%. Markington is the nearest settlement 1.1km north-east.</p> <p><u>Local effects</u> Job opportunities arising from this site are likely to be relatively limited, and while the site would provide a source of sandstone which could aid future development, the immediate settlements are unlikely to directly benefit in any significant way. The site is unlikely to either hinder or boost local tourism. Overall any effect is considered to be insignificant.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> A right of way 15.86/31/1 runs along the northern boundary of the site. The Nidderdale Way passes 280m south of the site and an on-road national cycle route runs 570m north of the site. No village greens or common land within 500m.</p> <p><u>Local effects</u> Bridleway 15.86/31/1 would be used as the site access route. It is therefore considered that users of this route would experience significant negative impacts as a result of the development due to increased traffic levels, dust and noise and visual impacts are also likely. The Nidderdale Way passes 280m south of the site however impacts are likely to be minimal to users of this long distance route as the site is well screened by woodland and dust and noise are unlikely to be significant at this distance. During the site visit a number of woodland tracks were noted on the north & east sides of southern site area. A track from south-east corner of south area goes parallel to Cayton Beck towards the crossing of the beck and Nidderdale Way, but is not a public right of way. Impacts (noise, dust, visual) may also be experienced by users of these informal routes. Overall impacts are considered to be moderate negative, as it may be hard to further mitigate impact on the bridleway.</p> <p><u>Plan level / regional / wider effects</u> Considered together with local effects above (effect on Nidderdale Way).</p>		✓	✓		m-	m-	m-
15. To protect	<u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> No schools		✓	✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
and improve the wellbeing, health and safety of local communities	<p>or health centres within 1km. Nearest settlement is Markington 1.1km north-east and a number of individual properties lie nearby including High Cayton 480m south-east, Barsneb 250m north, Shutt House 350m north-west and Thornton Moor Farm 440m south-west.</p> <p>Local Effects Without mitigation it is possible that noise and dust could affect nearby properties (particularly those to the north-east and north-west), so full assessment of these impacts will be needed, though intervening blocks of trees may decrease impacts at some surrounding properties. Visual impacts are also likely in locations where woodland do not screen views of the site. Impacts are considered to be neutral to minor negative when routine management measures are considered.</p> <p>Plan level / regional / wider effects None noted.</p>							?
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones Site is in Flood Zone 1. Around 2% of the site is at high risk of surface water flooding (1 in 30), a further 0.5% is at medium risk (1 in 100) and 3% is at low risk (1 in 1000).</p> <p>Local effects Flooding is not a significant issue at this site. The site will require a Flood Risk Assessment.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects Considered with plan wide effects below.</p> <p>Plan level / regional / wider effects The site would make a contribution to self-sufficiency in the supply of sandstone and may also support markets outside of the Plan area.</p>		✓	✓		+	+	+

Cumulative / Synergistic effects⁶⁸	
Planning context	Markington is the nearest settlement 1.1km north-east. Markington is not in the Harrogate settlement hierarchy.
Other Minerals and Waste Joint Plan Sites	None within 2km.
Historic minerals and waste sites	A historic landfill site at Scarah Bank Quarry lies 1.6km south.
Other	No cumulative effects noted
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Design to mitigate impact on ecological issues, in particular protected species and possible dust issues, in particular on nearby ancient semi natural woodland / PAWS and possible hydrology issues on Cayton Marsh SINC. The loss of woodland should be avoided at the southern site, and buffers should be applied in the northern part; • Design to minimise the irreversible loss of best and most versatile agricultural land and to protect high quality soil resources; • Suitable landscape assessment and design of development and landscaping of site to mitigate potential impacts on vulnerable receptors and landscape character (landscape assessment must ensure that effects on receptors and character are brought within acceptable levels); • Design to include suitable flood risk assessment; for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and SuDS as appropriate and mitigation of any hydrogeomorphic impacts on the river, and on groundwater supplies; • Design to include suitable arrangements for avoidance of impacts on nearby public right of way and a satisfactory solution to potential access issues along the bridleway. • Archaeological field evaluation and suitable mitigation strategy to be put in place, and assessment of impacts on nearby historic environment receptors; • Design to include suitable arrangements for access and local roads, including an appropriate traffic management plan; • Appropriate arrangements for control of and mitigation of the effects of noise, dust; • Appropriate restoration scheme using opportunities for habitat creation. <p>While mitigation for a number of effects is possible and referred to in the assessment above, the assessment notes the potential for significant negative effects to remain (for instance in relation to biodiversity). The Plan's decision has been to discount this site.</p>	

⁶⁸ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

**Appendix 3f: Assessment of Sites in Richmondshire District
Joint Minerals and Waste Plan**

Contents

ALLOCATED SITES			
Reference	Site Name	Type of site	Page
WJP18	Tancred, near Scorton	Landfill, recycling (including treatment, bulking and transfer), open windrow composting	4

EXCLUDED/ DISCOUNTED SITES			
Reference	Site Name	Type of site	Page
MJP62	Land at Toft Hill, near Kiplin	Extraction of sand and gravel	20
MJP46	Kiplin plant processing site, Kiplin	Retention of sand and gravel processing plant site	35
WJP01	Hillcrest, Harmby	Waste Transfer Station (including recycling)	47

Sustainability Appraisal Score

Score	Description
++	The Site option is predicted to have higher positive effects on the achievement of the SA objective. For example, this may include a highly significant contribution to issues or receptor of regional or wider 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 positive, but not highly positive contribution to issues or receptor of more than local significance, or to several 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 ¹ .
-	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 negative, but not highly negative contribution to an issue or receptor of more than local significance.
--	The Site option is predicted to have higher 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.

¹ This includes where there is no clear link between the site SA objective and the site

WJP18 – Tancred, near Scorton

Site Name	WJP18, Tancred, Near Scorton, Tancred landfill and Recycling Facility (XY 423454 500004)
Current Use	Waste transfer and recycling, open windrow composting at west end of site with landfill and recycling of inert waste at east end of the site.
Nature of Planning Proposal	Proposed retention of landfill beyond 2016 and recycling (including treatment, bulking and transfer) and open windrow composting facilities beyond 2025
Size	10ha – inert landfill, 1.98ha – recycling and composting facility
Proposed life of site	15 to 20 years
Notes	<p>Compost to be used in restoration to agriculture of the landfill site near Tancred Grange (which is currently permitted until June 2016 for importation of waste, with restoration by 2020). Operation of the transfer station / recycling facility and composting area is currently permitted until March 2025 with restoration to agriculture.</p> <p>Possible restoration and aftercare: no detailed design available, as currently under review, but current planning permission require restoration to standard suitable for agriculture.</p>

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat	<p>Proximity of international / national and local designations and key features Natura 2000: 6km west - North Pennine Dales Meadows SAC, 13km west - North Pennine Moors Special Area of Conservation (SAC) / Special Protection Area (SPA); Site of Special Scientific Interest (SSSI): 650m from nearest SSSI (Swale Lakes to the south); Site of Importance to Nature Conservation (SINC): 4 SINCS within 2km (various statuses). Nearest are Scorton Quarry (NZ20-04) 110m north; Catterick Gravel Pitts (SE29-16) 100m north and Howe Hill Riverside (deleted SINC) (SE29-08) - 190m south.</p>	✓	✓	✓		0	0	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
connectivity	<p>Priority habitats: Deciduous woodland borders the northern, western and southern boundaries.</p> <p>Site visit: The following features were noted on site: woodland / copse; Ecological networks: circa 45% of site within NY08 Swale Washlands Living Landscape; Green Infrastructure (GI): Site in Scorton / Croft Regional GI Network (D67). Supported by Richmondshire's local plan Policy CP12.</p> <p>Local effects Protected species that could be present would be associated with farmland and boundary features such as badger, breeding birds, foraging bats. There is woodland on boundaries of site – with effective surveys and mitigation no impacts would be expected.</p> <p>Imported materials have the potential to include invasive species. Japanese Knotweed and Himalayan Balsam are along the River Swale corridor just to the south. Cumulative effects in terms of disturbance to habitats and species in combination with adjacent works at Scorton Quarry. Sympathetic restoration of the two sites has the potential to lead to cumulative benefits for biodiversity.</p> <p>There are opportunities to include benefits for biodiversity within any future restoration scheme, including agricultural schemes (farmland birds are important in this area and restoration to wildlife friendly farming may be beneficial), such as species rich hedgerows, native trees and field margins. In order to minimise impacts during operation, the introduction of buffers to the margins of the site could be considered.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant impact on Natura 2000, SSSI or SINC sites.</p>							?
2. To enhance or maintain water quality and improve efficiency of	<p>Proximity of water quality / quantity receptors No Nitrate Vulnerable Zones (NVZ), No Groundwater Source Protection Zone (SPZ). In SUNO Management Catchment. Boundary of site seemingly connected with Scorton Beck from Source to River Swale. Moderate ecological status / chemical status: does not require assessment. Floodplain may connect the corner of the site to Swale from Muker Bk to Bedale Beck (Ecological quality - moderate potential / chemical quality: does not require assessment with overall potential moderate). Objective is good by 2027. No River Basin Management Plan (RBMP) lakes.</p>		✓	✓		0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
water use	<p>Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>Catchment Abstraction Management Strategies (CAMS): For most of site surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>The site currently holds an Environmental Permit for those activities at the site which are subject regulation under the Environmental Permitting Regulation (2010) as amended. Any proposal to increase waste quantities and extending the site would require a variation to this permit. For any variation to the Environmental Permit to be granted the applicant would need to demonstrate that existing odour and dust concerns at the site could be satisfactorily be addressed.</p> <p>Local effects The transfer station / recycling facility and composting area are already in place and permitted until 2025. As such they are considered to have no short or medium term impacts. In the long term, although runoff from these facilities could make its way into watercourses. This may have occasional residual impacts on the Muker Beck to Bedale Beck catchment without mitigation to which there is connectivity and may contribute to a diminished chance of achieving its RBMP / Water Framework Directive objectives. Impacts are seen a lower order as site is not in a NVZ, and would likely be dealt with via environmental permit.</p> <p>Plan level / regional / wider effects There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled.</p>							
3. To reduce transport miles and associated	<p>Proximity of transport receptors This site is close to the A1(M) (1.1km) making it easily accessible from nearby settlements. Access: existing onto B6271 at 1.4km west of Scorton village.</p>		✓	✓		0	m-	m-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
emissions from transport and encourage the use of sustainable modes of transportation	<p>Light Vehicles: estimated 20 daily two-way movements; HGV Vehicles: estimated 218 daily two-way movements².</p> <p>Net change in daily two-way trip generation: Light vehicles: 0; HGVs: 0. Traffic Assessment rating: Yellow <i>'Given that the site the site has been established for some period of time and that the traffic and HGV traffic generations of the site would remain at present levels, the WJP18 is expected to have no overall additional traffic impact. It is however recommended that the existing mitigation measures on HGV routing are retained as part of a renewed planning consent for the site.'</i>³</p> <p>Public Right of Way (PRoW): This site is not affected by a registered public right of way.</p> <p>Rail: 8.6km east; Strategic Road: A1(M) 1.1km west; Canal / Freight waterway: Tees Navigation 17km north-east.</p> <p>Local effects A relatively large amount of vehicle movements would result from this development, however in the short and early medium term there would be little change from the baseline situation as the site is consented until 2025 so some elements are on-going (beyond that, even though vehicle numbers are large, they should be seen as a continuation of current vehicles (which would have been, by this time, expected to cease). An initial Highways Assessment found that HGV movement is acceptable on to the B6271 although minor works may be required to improve the existing access arrangements. No modes of sustainable transport are likely to contribute to access the site. A Travel Assessment and Travel Plan would be required.</p>							?
	<p>² Estimate based on application MIN3995 details.</p> <p>³ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>The Joint Plan Traffic Assessment reports that “To minimise traffic impacts, HGVs exporting waste are required to route to the west and along the A6136 to travel to and from the A1”. However, the restriction does not apply to vehicles delivering waste, some of which passes through Scorton, though these are mostly lighter refuse vehicles. That assessment recommends that the existing mitigation measures on HGV routing are retained.</p> <p>Overall impacts are considered to be largely neutral in the short and early medium term as transport miles are likely to remain similar to the baseline situation. In the late medium term and long term impacts are likely to be moderate negative (due to lorries passing settlements, but at existing levels) though some positive impacts are noted because the waste transfer element effectively bulks up waste for more efficient transit.</p> <p>Some uncertainty is noted as the Highway Assessment notes that a highway authority improvement scheme may in the future affect the site.</p> <p><u>Plan level / regional / wider effects</u> The proposal is not expected to have wider effects on the SA objective.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
4. To protect and improve air quality	<p>Proximity of air quality receptors Not within a Hazardous Substances Consent Zone or within 2km of an Air Quality Management Areas (AQMA).</p> <p>The site currently holds an Environmental Permit for those activities at the site which are subject to regulation under the Environmental Permitting Regulation (2010) as amended. Any proposal to increase waste quantities and extending the site would require a variation to this permit. For any variation to the Environmental Permit to be granted the applicant would need to demonstrate that existing odour and dust concerns at the site could be satisfactorily be addressed.</p> <p>Local effects The transfer station / recycling facility and composting area are already in place and permitted until 2025. As such they are considered to have no short or early medium term impacts. After 2025 windrow composting may have an effect in terms of bio-aerosol release to air. Bio-aerosols are not expected to impact on Scorton due to its distance (650m east)⁴. Pollution from transport may combine with that of quarries to the west to create a minor negative effect on receptors around the edge of Brompton on Swale, or without a traffic routing agreement could affect receptors to the east (with moderate negative effects). However, aside from these local effects, waste transfer will take traffic off the roads, which is positive for pollution, however this is balanced with the extension of the estimated large number of vehicles that visit the site/ pass through the local area on a daily basis (HGV 218 daily two-way journeys).</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area in the short / medium term.</p>		✓	✓		-	-	-
						?	?	?

⁴ See HSE. 2010. Bio aerosol emissions from waste composting and the potential for worker's exposure [URL: <http://www.hse.gov.uk/research/rrpdf/rr786.pdf>] which concludes that "Downwind of compost handling activities, although at some sites the bio-aerosol levels at times were higher than upwind, even at 100 to 250 m distance.....there was little evidence therefore that the composting operations studied made a major contribution to the overall bio-aerosol burden by a distance of 250m from activities"

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors This site is on Agricultural Land Classification (ALC) Grade 3 land (Good to Moderate quality). In addition a previous planning application at the site (MIN3111) reported no best and most versatile agricultural land. Most of the site is covered by historic permissions. Site needs further investigation for contaminants. Coal mining subsidence: none noted.</p> <p>Local effects Although the site is relatively small and is currently being used for waste management purposes, the allocation may delay any restoration. There are some positive effects as compost will be produced and used in the restoration of a landfill site. Current permissions require the site to be restored to agriculture.</p> <p>Plan level / regional / wider effects As noted in local effects, retention of this site may help to avoid the need for a replacement site within the Plan area. Potentially, reducing any land-take and associated loss of soils and undeveloped land that may be required to develop / expand a new or existing site.</p>	✓	✓	✓		0	0	+
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Priority habitats: Deciduous woodland borders the northern, western and southern boundaries; Site visit: The following features were noted on site: woodland / copse.</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Windrow composting could prevent anaerobic degradation of future waste (a contributor to climate change). As there is existing waste transfer at the site, this would, presumably shorten onward journeys for waste (though may also generate some journeys of its own). No significant impacts on carbon storing habitats. Overall a positive impact is anticipated.</p>	✓			✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity⁵ of a site About 35% of the site is Flood Zones 2 and 3. Medium risk (1:100 (1%)) to high risk (1:30 (3.33%)) surface water flooding affects about 5% of the site. Ecological networks: c. 45% of site within NY08 Swale Washlands Living Landscape. Ouse Catchment Flooding Management Plan (CFMP) / Unit: Catterick / Policy 5.</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>This site is on ALC Grade 3 land, though the site is not been farmed and proposal is for the retention of an existing facility.</p> <p>Local effects This site may be vulnerable to future flooding, depending on the positioning of buildings on site. There may be opportunities to avoid flood risk through raising levels or co-ordinating drainage. These flood risks may get worse with climate change in the longer term. Climate change is likely to increase the 1:20 (5%) predicted flood event extent within the site. Areas of Flood Zone 3 are likely to increase into areas that are shown as Flood Zone 2 and Flood Zone 2 is likely to increase in extent into the site. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively, and therefore uncertainty is attached to the proposed allocations ability to respond and adapt to climate change in the long term. SuDS could be an option in this CFMP policy area. No effect on ecological networks, though the network could be enhanced, e.g. through SuDS.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		0	0	0
						?	?	
8. To minimise the use of	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects The retention of the site would facilitate the recycling of waste and would facilitate the</p>		✓		✓	+	+	+

⁵ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
resources and encourage their re-use and safeguarding	<p>movement of waste up the waste hierarchy (thereby reducing demand for future virgin materials. This site will produce a growing medium (compost). Impacts are therefore considered to be major positive in relation to this objective.</p> <p>Plan level / regional / wider effects As above.</p>							
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects Retaining a waste transfer site will allow for waste to be efficiently filtered and improve the ability to move waste up the waste hierarchy, but only to lower levels of the hierarchy. Impacts are therefore considered to be positive in relation to this objective.</p> <p>Plan level / regional / wider effects Considered the same as local effects.</p>		✓	✓		+	+	+
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Conservation Areas: Scorton (DNY1136) 700m east, Bolton-on-Swale (DNY1135) 900m south-east; Registered Parks and Gardens: None within 5km; Registered Battlefields: None within 5km; World Heritage Site: None within 5km; Scheduled Monuments: 880m south-west - 'Cataractonium Roman forts and town' (ID 1,021,181), 1.6km south - 'Pallet Hill motte and bailey castle, 80m north west of St Anne's Church' (ID ,021136), 1.8km north - 'Uckerby medieval village and open field system' (ID 1017691); Listed buildings: 23 Listed buildings within 1km (21 Grade II and 2 Grade II*). 15 of these lie in Scorton c. 850m east and 7 lie in Catterick Bridge c. 880m south west. Nearest Listed Building to site- Old Rectory (Grade II, NHLE no. 1131463) 800m east; Named designed landscapes: Brough Hall designed landscape 1.3km south-west.</p> <p>Historic Landscape Characterisation (HLC) Broad type - Enclosed land; HLC Type – Modern Improved Fields; Undesignated archaeology in this area includes evidence for prehistoric, Romano-British and early Medieval activity, as well as a later, modern, former airfield. The earlier remains comprise a range of</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>monument, settlement and burial sites which are known from a variety of sources, including aerial photographic transcription and archaeological fieldwork conducted in advance of previous quarrying activities in the area.</p> <p>Local effects The HLC type of this area is modern improved fields. The allocation site is a smaller part of a larger area of similar character type, of which the legibility is fragmentary.</p> <p>It is assumed that within the allocation site the HLC has already become invisible as the development has replaced an earlier field system.</p> <p>Accordingly, it is anticipated that there will no effect upon HLC.</p> <p>It is anticipated that there will be no impact upon the archaeological resource as the proposed development is a continuation of an existing, permitted use in an area of former quarry, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed.</p> <p>Plan level / regional / wider effects No impacts noted to the wider historic environment.</p>							
11. To protect and enhance the quality and	<p>Proximity of landscape / townscape receptors and summary of character National Park: Yorkshire Dales 8km W; AONBs: None within 10km; Heritage Coast: None within 10km; ITE: None within 5km;</p>	✓	✓	✓		0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
character of landscapes and townscapes	<p>Locally protected landscape: None within 5km.</p> <p>National Character Area (NCA): Vale of Mowbray; NYLCA: 24 - River floodplain; Local Character Area (LCA): Not included in local LCA; Intrusion: Most of site disturbed. Eastern fringe (c10%) undisturbed. On the 2007 CPRE map of urban intrusion most of the site is shown as disturbed and in fact quarrying has subsequently extended eastwards over adjacent land towards Tancred Grange. Light pollution: The area is shown on the 2000 CPRE map as having a level of 86 on a scale of 1-255, with 1 representing maximum darkness. Although this is moderate-low, it is very likely that levels have increased over the past 15 years.</p> <p>Local effects There are no effects on nationally or locally designated landscapes. The site lies next to the fairly busy B6281 between Scorton and Brompton-on-Swale, and could negatively affect the approach to both of them. There is existing roadside screening but this in itself indicates that this is not unspoilt countryside, and it is apparent that the site behind is very disturbed.</p> <p>The threshold for accommodation of landscape change has long been exceeded in this area, which is dominated by extensive past and present sand and gravel extraction and associated uses. 'Restored' areas are a mixture of wet and dry schemes, forming new sunken landscapes that rarely resemble original countryside and may include unnatural landforms. There is already a waste transfer station on the western part of the proposed allocation site and it is considered that this industrial development would be out of place with wider restorations. However, as the main transfer station for Richmondshire, if the site was not here it would have to go somewhere else (so it is not known if that would be a positive or negative impact).</p> <p>The site is screened although not completely effective in winter. There is already a lot of vehicle movement so this won't change overall character. There is uncertainty over planned restoration however this site has a separate landform to surrounding sites and is higher than surrounding land. The restoration scheme for this site should therefore not necessarily directly reproduce more of the features of other quarry restorations surrounding the site as this is a different landform.</p> <p>Plan level / regional / wider effects Considered the same as local effects.</p>						?	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth This site is close to the A1(M) making it easily accessible from nearby settlements.</p> <p>Local effects The site, as it is retained for longer, may retain jobs for longer. It is also considered that the site would enable value to be added to waste (through recycling, including treatment, bulking and transfer) and may divert some waste from landfill avoiding associated charges. The costs of waste management may be reduced by retaining this site as opposed to developing a new site as all the required infrastructure is already in place. Impacts are considered to be minor positive.</p> <p>Plan level / regional / wider effects Considered the same as local effects.</p>		✓	✓	✓	+	+	+
								?
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Index of Multiple Deprivation (IMD) Area is Brompton on Swale and Scorton – not in the most deprived 20%. Nearest settlement is Scorton at 650m east. Brompton is 850m west. Catterick lies 1.2km. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Brompton is a Service Village in the Hambleton Local Plan (5% of housing directed to Service Villages).</p> <p>Local effects Jobs could be retained for longer, which might benefit some local people. There is also a potential housing extension to the north-west of the site and impacts in relation to this would need to be considered.</p> <p>Plan level / regional / wider effects Considered at a local scale.</p>		✓		✓	+	+	+
							?	?
14. To provide opportunities to enable	<p>Proximity to recreation, leisure and learning receptors PRoW: Bridleway 20.58/11/1 is 40m south. No draft common land or village greens within 500m. Nearest draft common land is 'the Bogs, Scorton' 1.1km</p>		✓		✓	0	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
recreation, leisure and learning	<p>east.</p> <p>Local effects As this proposed allocation is purely for the retention of an existing site, no significant short term impact on recreation, over and above the existing site is predicted. It is possible users of the PRow may experience additional noise, dust and odour in the medium and longer term. Medium and long term impact are considered to be minor negative.</p> <p>Plan level / regional / wider effects Same as local effects.</p>						?	?
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlement is Scorton at 650m east.</p> <p>Local effects The transfer station / recycling facility and composting area are already in place and permitted until 2025. As such they are considered to have no short or early medium term impacts. After 2025 windrow composting may have an effect in terms of bio-aerosol release to air. Bio-aerosols (and odour (subject to an assessment)) are not expected to impact on Scorton due to its distance (650m east)⁶. Pollution from transport may combine with that of quarries to the west to create a minor negative effect on receptors around the edge of Brompton on Swale, or without a traffic routing agreement could affect settlements to the east with moderate effects.</p> <p>Plan level / regional / wider effects Considered at a local scale.</p>		✓	✓	✓	0	-	-
							?	?

⁶ See HSE. 2010. Bio aerosol emissions from waste composting and the potential for worker's exposure [URL: <http://www.hse.gov.uk/research/rrpdf/rr786.pdf>] which concludes that "Downwind of compost handling activities, although at some sites the bio-aerosol levels at times were higher than upwind, even at 100 to 250 m distance.....there was little evidence therefore that the composting operations studied made a major contribution to the overall bio-aerosol burden by a distance of 250m from activities"

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones About 85% of the site is Flood Zones 2 and 3. Medium risk (1:100 (1%)) to high risk (1:30 (3.33%)) surface water flooding affects about 10% of the site.</p> <p>Site lies across two 1km squares of differing susceptibility to groundwater flooding. The northern part of the site is in a 1km square, >50% to <75% of which is vulnerable to superficial deposits groundwater flooding and southern part of the site, including the site access, is in an area where >75% of the area is susceptible to superficial deposits flooding.</p> <p>Ouse CFMP / Unit: Catterick / Policy 5.</p> <p>Climate change is likely to increase the 1:20 (5%) predicted flood event extent within the site. Areas of Flood Zone 3 are likely to increase into areas that are shown as Flood Zone 2 and Flood Zone 2 is likely to increase in extent into the site. Climate change effects on surface water flooding are likely to increase the extents of the areas at risk and also the depth of flooding for each event respectively.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test⁷ undertaken for the site concluded that this site 'is not suitable'⁸. This site is vulnerable to future flooding. There may be opportunities to avoid flood risk through raising levels or co-ordinating drainage. These flood risks may get worse with climate change in the longer term.</p> <p>Although there is a higher risk of groundwater flooding the above ground nature of the development makes it less vulnerable (though this risk should be further investigated to determine if design measures for mitigation are needed).</p> <p>A flood risk assessment should consider how surface water flooding and drainage will be managed across</p>		✓	✓		--	--	--

⁷ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible.

⁸ Site is not suitable. More vulnerable land uses are not permitted at sites within functional floodplain.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	the site without increasing flooding elsewhere utilising SuDS. Plan level / regional / wider effects None noted.							
17. To address the needs of a changing population in a sustainable and inclusive manner	Proximity to factors relevant to the needs of a changing population No spatial factors identified. Local effects The retention of the site would increase public access to waste management facilities and would make a contribution to self-sufficiency in waste management which is essential for a changing population. Plan level / regional / wider effects The retention of the site would help to reduce the requirement for additional waste management facilities in the wider Plan area.		✓		✓	+	+	+
Cumulative / Synergistic effects⁹								
Planning context	Nearest settlement is Scorton at 650m east. Brompton is 850m west. Catterick lies 1.2km south. Catterick is a Primary Service Village in Richmondshire (13% of the housing – 240 houses across this category of settlement). Brompton is a Service Village in the Hambleton Local Plan (5% of housing directed to Service Villages). Policy 23 of the earlier local plan is the only saved policy within that plan, which allows development within development limits. As the site does not lie within any settlement limits it does not conflict with any allocations.							
Other Minerals and Waste Joint Plan Sites	Other MWJP sites: MJP21 Killerby 3.5km south-east, MJP17 Land South of Catterick 3.8km south and MJP33 Home Farm 4.7km south-east.							
Historic minerals and	There are 2 authorised landfill areas (Tancred and Scorton) just to the east of this site. Further historic landfilling extends westward associated with Catterick Bridge Civic Amenity Site. Further west (1km) lies a transfer station for non-hazardous waste. A number of historic landfill sites lie to the south within 2km. Numerous historic applications cluster around this site, mainly associated with Scorton and Tancred							

⁹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

waste sites	quarries, with additional extraction at Minto Grange and Hollow Banks Quarries and to the south extraction at Catterick Racecourse and Bridge Farm, and Pallet Hill Quarry further south.
Landscape Impacts	The threshold for accommodation of landscape change has long been exceeded in this area, which is dominated by extensive past and present sand and gravel extraction and associated uses. This site and other sites would continue to exceed the landscape's capacity to accommodate impacts resulting in a negative impact.
Traffic / Pollution / Health	Traffic may combine with that of quarries to the west to create a minor negative effect on receptors around the edge of Brompton on Swale.
Limitations / data gaps	
No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.	
Mitigation requirements identified through Site Assessment process	
<ul style="list-style-type: none"> • Mitigation measures to address and control invasive species. • Landscaping of site to mitigate potential impact on local landscape features, and to address cumulative effects of quarrying and its associated restoration in vicinity. • Improvements to access on to B6271. • Appropriate arrangements for control of and mitigation of the effects of noise, dust, odour, businesses, tourism and the community. • Appropriate restoration scheme using opportunities for habitat creation in the context of the adjacent Scorton Quarry. • A flood risk assessment should consider how surface water flooding and drainage will be managed across the site without increasing flooding elsewhere utilising SuDS. 	

MJP62 – Land at Toft Hill, near Kiplin

Site Name	MJP62 Land at Toft Hill, Near Kiplin, Sled Lane, Ellerton upon Swale, Richmondshire (XY 426119 497812)
Current Use	Agriculture
Nature of Planning Proposal	Extraction of sand and gravel
Size	8.7ha
Proposed life of site	8 to 10 years.
Notes	Mineral likely to be worked by wet method rather than by means of dewatering and processed at existing Kiplin processing plant site (see MJP46). Possible restoration: two lakes with partial reed fringe, extension to Toft Hill copse and grassland (to be managed for a species-rich sward) and new/reinforced hedgerow along B6271 and Sled Lane with permissive paths.

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p><u>Proximity of international / national and local designations and key features</u> Natura 2000: 8.9km north-west; North Pennine Dales Meadows; Site of Special Scientific Interest (SSSI): 0.6km from nearest SSSI (Swale Lakes); Site of Importance for Nature Conservation (SINC): nearest SINC approximately 800m (SE29-04 River Swale, Great Langston to Kiplin).</p> <p>UK Priority Habitats: Deciduous woodland circa 400m south.</p> <p>Site visit: The following features were found on site – pasture / grassland, hedgerows, one standalone tree, (and aerial photos indicate occasional arable use). Ecological networks: the site is almost entirely within NY08 Swale Washlands Living Landscape; site within Bee Lines buffer; Green Infrastructure (GI): Site lies entirely in R13 Swale Regional GI Corridor. Supported by Richmondshire's local plan Policy CP12.</p> <p><u>Local effects</u> Hydrological links with the nearby Swale Lakes SSSI will need investigating (uncertainty</p>	✓	✓	✓		-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>noted). No direct impacts are predicted for local SINC sites, though any impact of dewatering on SINC sites will need to be investigated. Protection of the river corridor from indirect impacts will need to form part of any application.</p> <p>Protected species associated with habitats on site include bats, badger, water vole, great crested newt, birds and brown hare. There are trees associated with field boundaries at the site, which will need to be identified.</p> <p>Restoration is noted as being to open water with nature conservation habitats. There are opportunities to create priority habitats for biodiversity. Long term management of this area will be key to the delivery of the benefits. There is, however, a need to consider Ministry of Defence (MoD) bird strike issues (the site lies within Leeming aerodrome and technical consultation zone) so that there are not conflicts with the intended after use. It is not clear how achievable the nature conservation element will be.</p> <p>Japanese knotweed <i>Fallopia japonica</i> and Himalayan Balsam <i>Impatiens glandulifera</i> are known from the river corridor.</p> <p>To summarise, in the short term there would be impacts relating to loss of habitat and disturbance to species. In the medium term these impacts would largely be neutral, but in the long term positive effects may occur depending on the level of biodiversity measures incorporated into the scheme and the degree to which these are secured in the long term.</p> <p>Plan level / regional / wider effects No pathways have been identified that are likely to give rise to significant effects on Natural 2000 sites. Potential cumulative impacts related to disturbance to species and loss of habitat in conjunction with Killerby (MJP21), Home Farm (MJP33) and existing sites at Scorton and Ellerton are possible. However, if high quality habitat is created as the predominant after use and the management of the site can be secured then there is the potential for significant cumulative benefits for biodiversity.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors No Nitrate Vulnerable Zone (NVZ) or groundwater source protection zone present. RBMP: In SUNO Management Catchment. Boundary of site seemingly connected with Scorton Beck from Source to River Swale. Moderate ecological status / chemical: does not require assessment. Floodplain may connect the corner of the site to Swale from Muker Bk to Bedale Beck (Ecological quality - moderate potential / chemical: does not require assessment with overall potential moderate. Objective is good by 2027. No RBMP lakes. Groundwater: SUNO Magnesian Limestone (overall status: good / objective: good by 2015).</p> <p>Catchment Abstraction Management Strategy (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects This is a small site, though there could be pollutant impacts that occur through fuel / chemical spills or run off of overburden when moved. There may also be impacts on groundwater or surface water flow. Impacts are likely to be relatively easy to mitigate through good site management, as there are no major constraints, though the Scorton Beck to River Swale water body may, if pollution episodes do occur repeatedly, be less likely to achieve its Water Framework Directives (WFD) status objective.</p> <p>Plan level / regional / wider effects There is potential pollution from the site could pass into the wider water environment via surface and groundwater pathways. In addition, minor impacts could be cumulative with other nearby quarries draining to the Swale.</p>		✓	✓		-	-	0
3. To reduce transport miles and	<p>Proximity of transport receptors The site is reasonably close to the A1 (1.8km although the distance to the nearest junction would be circa 5km) giving access to York, Leeds and Teesside. Access: onto Sled Lane (U1423 unclassified road) which is 85m from Ellerton Cross junction with B6271 at Ellerton, with</p>		✓	✓	✓	m-	m-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
associated emissions from transport and encourage the use of sustainable modes of transportation	<p>options for transport of the as-raised material being by road on B6271 to the Kiplin Hall Plant site (MJP46 – discounted site) for processing and distribution; or by conveyor or an off-road haul route to the Kiplin Hall Plant site (MJP46) for processing and distribution; or by taking the material to another location with existing processing facilities.</p> <p>Light Vehicles: estimate of 6 two-way daily movements (submitter information); HGVs: estimate of 24 two-way daily movements (submitter information).</p> <p>Public Right of Way (PRoW): this site is not affected by a registered public right of way.</p> <p>Rail: 7.7km south; Strategic Road: A1 1.8km west; Canal / Freight waterway: Tees Navigation 17km north-east.</p> <p>Local effects An estimated 24 two-way HGV movements and 6 two-way light vehicle movements would occur daily. The initial highways assessment indicated that movement of HGVs on to the B6271 would be acceptable however works will be required to improve safety at the site access. As there is a lot of cumulative development in this area (existing and proposed quarries, A1 upgrade) the cumulative impact would need to be considered in terms of capacity of the local road network. A traffic assessment would be required for this site.</p> <p>Plan level / regional / wider effects There is a great deal of uncertainty in this assessment pending the traffic assessment and confirmation of transport arrangements.</p>					?	?	
4. To protect and improve air quality	<p>Proximity of air quality receptors No Hazardous substances consent sites and no Air Quality Management Areas (AQMAs) within 2km.</p> <p>Local effects Although this is a relatively small site Ellerton is potentially in range of dust impacts (particularly when overburden is removed and potentially if processes such as drying out of materials takes place on site, or if reprofiling occurs during restoration). Other properties, e.g. at Ellerton Hill may also occasionally be affected at a low level without mitigation. In summary, this is a relatively small site but with proximal receptors, equating to minor negative impacts. However, traffic would route to the nearby Kiplin</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Plant meaning that receptors would be those between the two sites (i.e. Ellerton Hill which is greater than 250m from the transit route and out of reach of significant traffic pollutants and traffic generated dust and priority woodland at the side of the road (possibly vulnerable to minor impacts through dust deposition).</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area.</p>							
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Agricultural Land Classification (ALC) Grade 3. Greenfield site - no known risk factors for contaminated land. Coal mining subsidence: none noted.</p> <p>Local effects A potential loss of 8.7ha of ALC Grade 3¹⁰, this site is not intended to be restored to agricultural land.</p> <p>Plan level / regional / wider effects The loss of very good agricultural land cumulatively could have an effect on national food production capacity. The contribution of this site to the cumulative loss is considered to be a small in relation to the overall agricultural land lost in England per annum to development¹¹ but could have a small scale effect on national food production capacity.</p>	✓		✓		-	-	-
						?	?	
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Site visit: the following features were found on site – Pasture / grassland, hedgerows, one standalone tree.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects Traffic from the site will be relatively low level and only move a short distance to processing. On site habitats have carbon storage potential. Arguably ensuring local processing</p>	✓			✓	-	-	+

¹⁰ ALC Grade 3 land is sub-divided into Grade 3a and 3b, with the best and most versatile agricultural land ALC Grade 1 to 3a. Without further investigation it is not known whether Grade 3 land at this site is 3a or 3b and best and most versatile. For the purposes of this SA the precautionary principle approach has been adopted and it is assumed that Grade 3 land is Grade 3a and the best and most versatile agricultural land.

¹¹ 8.7ha annualised across the 10 year life of the site would be an annual 0.87ha loss. There was 2365ha of agricultural land was lost to development in 2014/15 across England. A 0.87ha loss would represent a 0.04% contribution to this category of soil loss across England for each year of the site.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	would have some benefits for climate change.							
7. To respond and adapt to the effects of climate	Proximity of factors relevant to the adaptive capacity¹² of a site South west and south east corners (total less than 5%) in Flood Zone 3. Further 15% in Flood Zone 2 mainly in south east corner and a small patch in the west. There are a few small patches of 1 in 1000 year surface water flooding risk and a tiny (circa 1%) patch of 1 in 100 risk flooding. Ouse Catchment Flood Management Plan (CFMP) - Unit: Swale Washlands / Policy 6. Site in SUNO CAMS. Ecological networks: Site almost entirely within NY08 Swale		✓		✓	-	-	+

¹² Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
change	<p>Washlands Living Landscape; site within Bee Lines buffer.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>ALC Grade 3 agricultural land.</p> <p>Local Effects Although the site is barely affected by flooding and is water compatible, there is the prospect that Flood Zone 3, which overlaps the corners of this site could drain into the site during extraction. In the longer term there could be an advantage to having water bodies on this site in terms of their flood storage capacity, which would be consistent with the CFMP policy. The site is unlikely to block ecological networks significantly, but could contribute to them in the future through ecological restoration.</p> <p>Plan level / regional / wider effects Agricultural land is increasingly recognised as being vulnerable to climate change, loss of this land will have a combined effect with wider losses elsewhere due to climate change – the effect is considered a minor negative.</p>							?
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site No spatial factors identified.</p> <p>Local effects This site will contribute to the need for sand and gravel. However, it may to a degree offset recycled materials that could potentially replace sand and gravel. A potential 500,000 tonnes of virgin minerals would be extracted which will be unavailable for future use (unless recycled). This works against the SA objective, so it is scored negatively. The impact would continue until such time as extraction ceases.</p> <p>Plan level / regional / wider effects Considered to be the same as local effects.</p>	✓		✓		-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects The site would not deal with waste and no details are provided of how waste would be managed on site.</p> <p>Plan level / regional / wider effects The site may have an indirect negative impact on the prioritising the management of waste down the waste hierarchy as a result of providing sand and gravel reducing the need to recycle sand and gravel from other locations.</p>		✓		✓	-	-	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Conservation areas: none within 1km. Nearest is Bolton on Swale Conservation area 1.1km north-west. Registered Parks and Gardens: Hornby Castle Park (Grade II) is 3.7km south-west. Registered Battlefields: none within 5km. World Heritage Sites: None within 5km; Scheduled Monuments: four within 2km – Castle Hills medieval motte and bailey castle, and 20th century airfield defences, 700m north east of Oran House (850m south-west of site); World War II fighter pens and associated defence at former RAF Catterick, 120m south and 340m north east of Oran House (1.2km and 1.6km south-west of the site); Bainsesse Roman roadside settlement and Anglian cemetery (1.9km south-west); and Pallet Hill motte and bailey, 80m north-west of St Anne's Church (1.9km west of the site).</p> <p>Listed buildings: six listed buildings within 1km (two at Ellerton, both Grade II; three at Kiplin Hall, all Grade II). The closest listed buildings are located at Ellerton (350m to 400m south-west).</p> <p>Named designed landscapes: Kiplin Hall (Designed Landscape – unidentified parkland) 570m SE. Killerby Hall 1.4km south.</p> <p>Historic Land Characterisation (HLC) Broad type – Enclosed land / HLC Type - piecemeal enclosure.</p> <p>Undesignated archaeology in this area includes the remains of former medieval field systems. There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the</p>	✓		✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>area. Although current archaeological evidence for earlier activity in this area is limited, it can be inferred from similar areas of sand and gravel alongside the River Swale where archaeological evaluation has been carried out, which have revealed remains of early human activity in the Mesolithic period, and subsequent settlement and burial activity dating from the later prehistoric period onwards.</p> <p>Local effects The HLC type of this area is piecemeal enclosure. The allocation site is a small part of a larger area of similar character type, of which the legibility is significant. It is felt that the proposed extraction is unlikely to have a major impact upon the historic landscape character of the immediately surrounding area, although it is acknowledged that within the site the historic landscape character will become invisible as development will replace an earlier field system. As 14% of the whole HLC project area has been identified as planned enclosure, this effect is not considered to be significant.</p> <p>Manor Cottage a Grade II Listed Building and Castle Hills Medieval Motte and Bailey Castle Scheduled Monument lies 850m from the site and impacts upon these designated assets would need to be considered, as mineral development on this site could harm elements which contribute to their significance.</p> <p>There is high archaeological potential for the survival of archaeological remains within the site from the later prehistoric period onwards and, although the site has not been archaeologically evaluated, it is assumed that allocating this site would be likely to cause the loss of these archaeological remains if the site is extracted without mitigation. However, it is expected that investigation/ excavation works required by the Joint Plan Policy D08 (Historic Environment) '<i>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 before or during development.</i>' would result in an effect of no greater than minor negative.</p> <p>Archaeological potential is deemed uncertain until such time as an archaeological field evaluation is carried out. The results of such work would provide more certainty about the nature and significance of below ground deposits.</p> <p>Plan level / regional / wider effects None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character National Parks / Area of Outstanding Natural Beauty (AONBs): none within 10km; Heritage Coast: none within 10km; Inheritance Tax Exemption (ITE): no. Locally protected landscape: no.</p> <p>National Character Area (NCA): Vale of Mowbray; North Yorkshire Landscape Character Assessment (NYLCA): 24 - River Floodplain. This has high visual sensitivity due to open / flat landform; high ecological sensitivity due to patchwork of habitats; high landscape and cultural sensitivity due to lots of historic assets and 'dynamic' landscape pattern of narrow river corridors. Local LCA: not covered in local LCA.</p> <p>Local effects No impact predicted on nationally or locally designated landscapes. However, the site would have a negative impact on the approach to the small settlement of Ellerton-on-Swale.</p> <p>The site is adjacent to the Ellerton Quarry site, although the quarry itself lies to the south and it does not appear that the field to the east has been excavated. To the east lies Kiplin Hall Quarry. There are cumulative effects with this site - the local area is dominated by sand and gravel extraction, past and present, the threshold for it to be accommodated without change in character having been exceeded many years ago. This site would be more conspicuous than some, being bounded on three sides by roads or lanes.</p> <p>There would be no impact on urban intrusion. However, the Ellerton-on-Swale area is affected by extensive historic or current quarrying. Overall, this is not a particularly tranquil area, with moderate intrusion.</p> <p>The site is mostly open and not well screened. This site would be very visible from the B6271 road and the track to the east and south of the site; there is also a potential impact on the café at Ellerton. Vehicle movements would not change the character of the area.</p> <p>Plan level / regional / wider effects None noted.</p>	✓	✓	✓		m-	m-	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p>Proximity of factors relevant to sustainable economic growth The site is reasonably close to the A1 giving access to York, Leeds and Teesside.</p> <p>Local effects This site would ultimately result in an estimated 500,000 tonnes of sand and gravel being made available to the market. This would make a modest contribution to the building sector by helping to boost supply of a key building material. The effect overall is considered to be positive in the short and medium term and neutral in the long term as a result to positive of restoration plans, as restoration to recreation may attract limited numbers of visitors to the area, depending on the type of recreational opportunities provide.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability Index of Multiple Deprivation (IMD) Area is Brompton on Swale and Scorton – not in the most deprived 20%. Nearest settlement is Ellerton at 90m. The larger Catterick lies 1.5km west while 3.5km to the north-west is Brompton on Swale. Kirkby Fleetham lies 3.4km south-east.</p> <p>Local effects This is a relatively small site that would provide limited jobs, so positive effects are limited. There is concern that Ellerton on Swale may be affected by dust and the comings and goings of lorries which might have a slightly deleterious effect on community interactions in the settlement. Local people are likely to benefit from the restoration in the longer term in terms of access to accessible countryside.</p> <p>Plan level / regional / wider effects Not applicable to this site.</p>		✓	✓	✓	-	-	0
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors Bridleway 20.26/2/1 is 350m north-west. No common land or village greens within 500m. GI: Site lies entirely in R13 Swale Regional GI Corridor. Supported by Richmondshire's local plan Policy CP12.</p> <p>Local effects The site does not have any rights of way immediately adjacent. While there is a bridleway to the north. Short intervening hedges downslope from this receptor may mean that the site is still visible and possibly susceptible to limited noise. Minor negative in the short term, but longer term restoration is likely to</p>		✓	✓	✓	-	-	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>be positive.</p> <p>Plan level / regional / wider effects None noted.</p>							
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing No schools or health centres within 1km. Nearest settlement is Ellerton at 90m.</p> <p>Local effects Although this is a relatively small site Ellerton is potentially in range of noise and dust impacts (particularly when overburden is removed and potentially if processes such as drying out of materials takes place on site, or if reprofiling occurs during restoration). Other properties, e.g. at Ellerton Hill may also be affected. In summary, this is a relatively small site but with proximal receptors, equating to moderate negative impacts. However, traffic may be cumulative with MJP46 and MJP33, depending on the route, so there is uncertainty as to whether dust, noise, vibration, road safety and congestion impacts may combine with the aforementioned proximal impacts to create a lower order moderate negative effect.</p> <p>Plan level / regional / wider effects None noted.</p>		✓		✓	m-	m-	0
16. To minimise flood risk and reduce the impact of	<p>Proximity to flood zones South west and south east corners (less than 5%) in Flood Zone 3. Further 15% off the site in Flood Zone 2 mainly in south east corner and a small patch in the west. There are a few small patches of 1 in 1000 year surface water flooding risk and a tiny (circa 1%) patch of 1 in 100 risk flooding. Ouse CFMP - Unit: Swale Washlands / Policy 6.</p>	✓	✓	✓		-	-	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
flooding	<p>Local effects Flood risk to this site is very small scale and the site use is considered water compatible. Nonetheless, it is possible the very small overlap with Flood Zone 3 could cause wider flooding (as site would drain the floodplain) depending on which part of the site is being worked so appropriate emergency planning would need to be in place. In the medium to long term flood storage could be offered by this site with small scale positive effects on the catchment.</p> <p>The site will be subject to sequential testing as part of the Strategic Flood Risk Assessment (SFRA). Impacts are uncertain pending the outcome of this assessment.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The site would make a modest contribution to self-sufficiency in the supply of sand and gravel.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>		✓		✓	+	+	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
Cumulative effects	<p><u>Cumulative / Synergistic effects</u></p> <p><u>Planning Context:</u> the nearest settlement is Ellerton at 90m. Catterick lies 1.5km west.</p> <p>Catterick is a Primary Service Village (provide for fewer services than Local Service Centres that support the needs of rural communities – 13% of housing is directed to these settlements), while Ellerton is ‘elsewhere in the Plan area’ (5% of housing development is directed towards ‘Elsewhere in the Plan area’). Policy 23 of the earlier local plan is the only saved policy within that plan, which allows development within development limits. As the site does not lie within any settlement limits it does not conflict with any allocations.</p> <p><u>Other Joint Minerals and Waste Plan Sites:</u> MJP46 is 600m south-west; MJP21 is 800m south; MJP33 is 1.6km south-east. WJP18 is 1.8km north-west, MJP17 is 2km south-west.</p> <p><u>Historic Minerals and Waste Sites:</u> to the south of the site lie historic applications (granted 1950s and 1990s) associated with extraction at the River Swale (650m) and Manor House Farm (immediately adjacent). Kiplin Hall extraction is 300m south-east. An historic landfill site, Swale Quarry, lies 720m north-west, with waste disposal taking place at three locations across this site. A cluster of historic applications group around Tancred Quarry form 1.6km north-west and beyond.</p> <p><u>Biodiversity:</u> Cumulative impacts related to disturbance to species and loss of habitat in conjunction with Killerby (MJP21), Home Farm (MJP33) and existing sites at Scorton and Ellerton are possible. However, if high quality habitat is created as the predominant after use and the management of the site can be secured then there is the potential for significant cumulative benefits for biodiversity.</p> <p><u>Landscape:</u> The site is adjacent to the Ellerton Quarry site, although the quarry itself lies to the south and it does not appear that the field to the east has been excavated. To the east lies Kiplin Hall Quarry. There are potential cumulative effects – the local area is dominated by sand and gravel extraction, past and present, the threshold for it to be accommodated without change in character having been exceeded many years ago. This site would be more conspicuous than some, being bounded on three sides by roads or lanes.</p>							
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.							

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on protected species and habitats any potential hydrological impacts on the Swales Lakes SSSI and River Swale SINC.
- Appropriate arrangements for control of and mitigation of noise, dust.
- Design to minimise impact on the best and most versatile agricultural land and to protect high quality soil resources.
- Design to include suitable flood risk assessment (FRA); for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and sustainable urban drainage as appropriate.
- Design to mitigate impacts to heritage assets, landscape features and rights of way.
- Appropriate restoration scheme using opportunities for habitat creation, considering Ministry of Defence safeguarding zones.

MJP46 – Kiplin Plant Processing Site

Site Name	Site MJP46 (Kiplin Processing Plant Site, Kiplin, Richmondshire)
Current Use	Quarry processing plant site
Nature of Planning Proposal	Retention of processing plant site to serve future extraction in the local area
Size	6.7ha
Proposed life of site	12 years, including restoration
Notes	The plant site was mothballed in approximately 2012 and the current approved restoration plan for the MJP46 site is to agriculture by June 2017

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and geo-diversity and improve habitat connectivity	<p>Proximity of international / national and local designations and key features Natura 2000 sites – 10km north-west - North Pennine Dales Meadows. The site lies 1.6km from the nearest SSSI (Swale Lakes). Nearest SINC 450m south (SE29-04 River Swale, Great Langston to Kiplin) - Functional connectivity- floodplain. In terms of Priority Habitat, the site lies adjacent to / has some overlap with deciduous woodland to the south, east and north.</p> <p>Ecological Networks – around 30% of the site is covered by core England Habitat Network (eastern area). Site lies within R13 Swale regional GI corridor and entirely within NY08 Swale Washlands Living Landscape (key habitats- River Swale, wetlands. Management issues- Aggregate extraction site restoration).</p> <p>The site is on a previously developed site that has been mothballed for over two years, the site is within a regional GI corridor and vegetation may have recolonised parts of the site.</p> <p>Local effects It is not considered that there would be any significant impact on international or national sites, priority habitats or protected species or ecological networks as a result of the proposals (however,</p>	✓			✓	0	0	?

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>there would still be a need to investigate dust deposition and water extraction / discharge impacts on wildlife as conditions may have changed since the site was established).</p> <p>The current planning permission (NY/2012/0159/73) requires restoration to agriculture, by June 2017, which would have limited benefits for biodiversity. It is considered that minor positive impacts could arise should biodiversity enhancements be included or should a non-agricultural restoration scheme be implemented (as this site lies in a Living Landscape this represents an opportunity to restore the site in a way that is sympathetic to this designation) and therefore a result of uncertain score has also been recorded.</p> <p>Plan level / regional / wider effects No pathways have been identified that are likely to give rise to significant effects on Natura 2000 sites.</p>							
2. To enhance or maintain water quality and improve efficiency of water use	<p>Proximity of water quality / quantity receptors Site does not lie within a NVZ. Site is located in Groundwater SPZ 3.</p> <p>The site is in the Humber RBMP and an RBMP watercourse, Scorton Beck from Source to River Swale, passes through the site (it crosses the access track in the north of the site). This watercourse has moderate status in terms of ecological quality and does not require assessment for chemical quality. In terms of groundwater the RBMP identifies the site as being in the SUNO Sherwood Sandstone water body which has good quantitative quality / poor chemical quality.</p> <p>CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Local effects The retention (and thus extended operation of the plant) will potentially draw on and dispose of water for screening and washing into the future. While this appears to be acceptable at present, the disposal of water has the potential to affect the status of local water bodies and the drawing of water has potential impacts upon water quantity / availability. Until it can be shown that impacts on water are acceptable the effect will remain uncertain.</p>		✓		✓	?	?	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects There is potential pollution from the site could pass into the wider water environment via surface and groundwater pathways.							
3. To reduce transport miles and associated emissions from transport and encourage the use of sustainable modes of transportation	<p>Proximity of transport receptors The site is close to the A1 (2.5km) giving reasonably good access to York, Leeds and Teesside. Access: existing Kiplin Plant site access onto B6271 approximately 440m west of entrance to Kiplin Hall, then via B6271 and A6136.</p> <p>Light Vehicles: 10 two-way daily movements (submitter information); HGVs: 24 two-way daily movements (submitter information).</p> <p>PRoW: this site is not affected by a registered public right of way.</p> <p>Rail: Nearest national rail network 7.2km east 4.7km south (nearest station Leeming Bar 5.4km south-east). Strategic Road: A1 2.5km west; Canal / Freight waterway: Tees Navigation 16.5km north-east.</p> <p>Local effects The retention of this site would mean that existing traffic flows would continue for a further 12 years. As there are other developments in this area (existing and proposed quarries, A1 upgrade) the cumulative impact of retaining this facility would need to be considered in terms of capacity of the road network. The initial highways assessment indicates that HGV movement would be acceptable on to the B6271 although some minor works may be required to upgrade the existing access arrangements. It is not likely that any sustainable modes of transport would be utilised at this site (although there is a possibility that material could arrive at MJP46 from the nearby MJP62 Toft Hill site via a conveyor). Impacts are considered to be minor negative with some uncertainty.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓	✓	-	-	0
4. To protect and improve air quality	Proximity of air quality receptors Site is not within a hazardous substances consent consultation zone or an AQMA. The site is around 800m from the nearest settlement, Kiplin although a number of isolated properties lie in closer proximity (nearest property 80m north east). The site is bordered by deciduous					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>woodland to the north, east and south and these may be receptors for dust.</p> <p>Local effects Given that the site is some distance from the nearest settlement and individual properties are well screened by intervening woodland, air quality impacts to residential receptors are predicted to be largely insignificant, though there may be small scale minor impacts on the priority woodland surrounding the site (e.g. reduction in tree health) which should be further investigated.</p> <p>Plan level / regional / wider effects There are no air quality effects expected to the wider area.</p>							
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors The site is on ALC Grade 3 agricultural land, though this has already been developed. In terms of land stability development does not lie within or adjacent to a Coal Authority development high risk area.</p> <p>Local effects Under the current planning permission (NY/2012/0159/73), the site would be restored to agriculture after 2017. This allocation would prolong the amount of time that the site is not available for agricultural use. A minor negative impact is therefore recorded during the possible extended operation period of the processing plant.</p> <p>Plan level / regional / wider effects None noted.</p>		✓	✓		-	-	0
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change Woodland lies adjacent to the site. Some woodland and standalone trees lie on site.</p> <p>Local effects As climate change is a global issue, effects are reported in wider effects below.</p> <p>Plan level / regional / wider effects This site is already developed, although possible minor loss of productivity to on site and adjacent trees and woodland from dust deposition on leaves may occur. The continued operation of the site would result in continued vehicle movements to and from site (10 two-way light goods movements and 24 two-way HGV movements). However, as material is being received from the nearby MJP62 Toft Hill site, the retention of this site may negate the need for minerals to be transported further to another processing site. Overall impacts are considered to be largely neutral.</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
7. To respond and adapt to the effects of climate change	<p><u>Proximity of factors relevant to the adaptive capacity¹³ of a site</u> Surface water flooding affects around 20% of the site at 1000 year return period. Approximately 75% of the site lies in Flood Zone 3 and 25% in Flood Zone 2. Ecological networks – around 30% of the site is covered by core England Habitat Network (eastern area). Site lies within R13 Swale regional GI corridor and entirely within NY08 Swale Washlands Living Landscape (key habitats- River Swale, wetlands. Management issues- Aggregate extraction site restoration). CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p>Site is in on ALC Grade 3 agricultural land though this has already been developed.</p> <p><u>Local effects</u> As the plant site is already in place, no additional effects are predicted in relation to this objective.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
8. To minimise the use of resources and encourage their re-use and safeguarding	<p><u>Proximity of factors relevant to the resource usage of a site</u> No spatial factors identified.</p> <p><u>Local effects</u> This site will contribute to the need for minerals through processing. Although it does not directly lead to minerals extraction, keeping this plant and haulage road in situ will indirectly prevent other plant / roads being required. This is a minor positive impact.</p> <p><u>Plan level / regional / wider effects</u> Considered to be the same as local effects.</p>		✓	✓		+	+	0

¹³ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p><u>Proximity of factors relevant to managing waste higher up the waste hierarchy</u> No spatial factors identified.</p> <p><u>Local effects</u> None noted.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p><u>Proximity of historic environment receptors</u> No Conservation Areas within 1km. Hornby Castle Park (Grade II) lies 4.1km south-west. No registered battlefields or World Heritage Sites within 5km. Two Scheduled Monuments within 2km – 1.5km south-west 'Castle Hills medieval motte and bailey castle, and 20th century airfield defences, 700m north east of Oran House' (ID 1,020,991), 1.7km south-west 'World War 2 fighter pens and associated defences at former RAF Catterick, 120m south and 340m north east of Oran House' (ID 1,020,990). Ten Listed Buildings within 1km (one Grade I and nine Grade II). The majority of these are related to Kiplin Hall (Grade I, ID 1,315,476) 280m south-east. Closest Listed Building to the site – Boundary Stone (Grade II, ID 1,150,997) 60m north-east. Site lies within Kiplin Hall named designed landscape.</p> <p>HLC Broad type – Extractive, HLC Type – Quarry aggregates. Undesignated archaeology in this area includes the remains of former medieval field systems. There is potential for evidence of earlier settlement and activity pre-dating the medieval period to be present in the area, although current archaeological evidence for this is limited.</p> <p><u>Local effects</u> The HLC type of this area is quarry aggregates. The allocation site is a smaller part of a larger area of similar character type, of which the legibility is partial. Within the allocation site the previous historic landscape character of piecemeal enclosure has already become invisible as the extractive development has replaced an earlier field system. Accordingly, the continued use of the site for the quarry</p>					0	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>processing purposes is assumed to have no overall impact. It is anticipated that there will no effect upon historic landscape character.</p> <p>It is anticipated that there will be no impact upon the archaeological resource as the proposed development is for the continuing use of a former quarry, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed.</p> <p>Plan level / regional / wider effects None noted.</p>							
11. To protect and enhance the quality and character of landscapes and townscapes	<p>Proximity of landscape / townscape receptors and summary of character No National Parks, AONBs or Heritage Coast within 10km. No Inheritance Tax Exemption Land within 5km. In terms of tranquillity landscape is 'disturbed'. Light pollution: In 2000, the site scored 57 on the CPRE scale of 1-255, with 1 as the maximum darkness, therefore had relatively low levels of light pollution. These may have subsequently increased.</p> <p>The site is not within a local landscape designation but it lies within the boundary of the undesignated historic designed landscape of Kiplin Hall, much of which is well maintained and a tourist attraction.</p> <p>Site lies within the Vale of Mowbray NCA and is categorised as '24 River Floodplain' in the North Yorkshire and York LCA. This character type has high visual sensitivity (as a result of the predominantly open character and flat landform (which facilitates long distance open views across the landscape and promotes strong inter-visibility with adjacent Landscape Character Types). High ecological sensitivity as result of the patchwork of fen, flood meadows, floodplain mires, marsh and swamp, inland bare ground and calcareous grassland habitats. Several of these habitats are designated as SSSI and Ramsar sites. High landscape and cultural sensitivity as a result of the presence of numerous historic settlement sites and designated landscapes, coupled with a dynamic landscape pattern of narrow river corridors. The site lies in Richmondshire and is not covered by a district level LCA; however the site is adjacent to the district boundary with Hambleton. The Hambleton LCA identifies the adjoining Kiplin Hall area as 7b Estate Landscape (including parkland).</p> <p>Although the site is not in a particularly tranquil area, it is in a transitional area between largely unspoilt</p>		✓	✓	✓	-	-	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>countryside to the east, and areas affected by mineral extraction, settlement, roads and other urbanising activities to the west.</p> <p>Local effects It is considered that views from Kiplin Hall (a visitor attraction) would continue to be affected should the processing plant be retained. The site will not affect nearby settlements.</p> <p>The landscape in this area has already been disturbed by extraction of sand and gravel, and by the location of the processing plant on this site. However, it is a sensitive location and the impacts of re-siting the plant elsewhere need to be assessed against the further impact on the historic designed landscape of Kiplin Hall and the potential for restoration that is appropriate for the location. As the retention of the plant is linked to new areas of extraction in the vicinity, there will be new cumulative effects as well as the existing.</p> <p>In terms of visual intrusion, the site is in an area that is generally well screened from the public, though it is in an intrusive location in relation to Kiplin Hall. It is partially screened from the remaining parkland and Hall in winter and probably more effectively in summer.</p> <p>In summary, impacts are considered to be minor negative for the additional 12 years that the site would be operational. Because the lifetime of the plant would be extended, effects are related to this continuation relative to the previously anticipated baseline which would have seen the site restored to agriculture after 2017. It is considered that the site may become more conspicuous in the landscape as other surrounding sites are restored. A more sensitive restoration scheme could fit in with the surrounding parkland.</p> <p>Plan level / regional / wider effects None noted.</p>							

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
12. Achieve sustainable economic growth and create and support jobs	<p><u>Proximity of factors relevant to sustainable economic growth</u> Site is close to the A1 giving it good access to key markets such as Darlington (16km) and Middlesbrough (26km) to the north.</p> <p><u>Local effects</u> The site is reasonably proximal to possible markets. Limited numbers of jobs will be supported, which may support a few workers in nearby areas (most likely existing workers at the site). The site, being for processing, adds value and creates a high quality product using existing infrastructure (which at least in terms of the embodied energy of plant is more sustainable), though does not particularly represent low carbon development however as possible markets are accessed by road, which could increase the carbon footprint of building, though not particularly significantly. The effect overall is however positive during the operational period of the site.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>		✓	✓	✓	+	+	0
13. Maintain and enhance the viability and vitality of local communities	<p><u>Proximity of factors relevant to community vitality / viability</u> IMD area is Brompton-on-Swale and Scorton – not in most deprived 20%. Nearest significant communities: Kiplin 800m south-east, Ellerton-on-Swale 1.2km west. Properties 80m north-east, several properties 150m to 200m east, Kiplin Hall 250m east, properties as Ellerton Hill 600m north-west and Plantation Farm 720m north.</p> <p><u>Local effects</u> The site is well screened from nearby receptors, visual amenity impacts are considered to be negligible. The processing plant site forms part of the Kiplin Hall Estate and it is understood (from the supporting statement for consent C1/21/16H/CM) that revenues gained from the processing plant site have been re-invested into Kiplin Hall and Estate, an important historic asset and successful tourist attraction. It is therefore considered that the retention of this site may enhance the viability of Kiplin Hall whilst also enabling the provision of locally available construction materials. A moderate positive impact is therefore recorded under this objective.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>	✓	✓	✓	✓	m +	m +	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
14. To provide opportunities to enable recreation, leisure and learning	<p><u>Proximity to recreation, leisure and learning receptors</u> Bridleway 20.26/2/1 begins 150m north west of the site.</p> <p><u>Local effects</u> The site is well screened and so visual impacts upon users of nearby rights of way are considered to be negligible. The retention of the site would lead to the continued use of B6271 by site traffic although the impacts of this upon users of rights of way that adjoin this road are considered to be negligible.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					0	0	0
15. To protect and improve the wellbeing, health and safety of local communities	<p><u>Proximity to population / community receptors / factors relevant to health and wellbeing</u> No hospitals, clinics or health centres within 1km. The village of Kiplin lies 800m south-east and Ellerton-on-Swale 1.2km west. Individual properties lie 80m north-east, several properties 150m-200m east, Kiplin Hall 250m east, properties as Ellerton Hill 600m north-west and Plantation Farm 720m north.</p> <p><u>Local effects</u> The retention of this facility would result in the continuation of existing amenity issues including noise, dust and traffic impacts for a further 12 years. This is considered to constitute a minor negative impact in the short and medium term.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					-	-	0
16. To minimise flood risk and reduce the impact of flooding	<p><u>Proximity to flood zones</u> Surface water flooding affects around 20% of the site at 1000 year return period. Circa 75% of the site lies in Flood Zone 3 and 25% in Flood Zone 2.</p> <p><u>Local effects</u> This allocation would seek to retain a processing site in an area of high flood risk. Therefore considered a moderate negative effect.</p> <p><u>Plan level / regional / wider effects</u> None noted.</p>					m	m	0
17. To address the	<p><u>Proximity to factors relevant to the needs of a changing population</u> The site does not conflict with any</p>		✓		✓	+	+	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
needs of a changing population in a sustainable and inclusive manner	<p>known allocations in other plans.</p> <p>Local effects The site would make a small contribution to self-sufficiency in the supply of sand and gravel products.</p> <p>Plan level / regional / wider effects The site may also support markets outside of the Plan area.</p>							
Cumulative effects	<p><u>Cumulative / Synergistic effects</u>¹⁴</p> <p><u>Planning Context</u>: the nearest communities: Kiplin 800m south-east, Ellerton-on-Swale 1.2km west. Catterick is 2km west at the nearest point.</p> <p>Catterick is a Primary Service Village in Richmondshire (provide for fewer services than Local Service Centres that support the needs of rural communities – 13% of housing is directed to these settlements), while Ellerton and Kiplin are ‘elsewhere in the Plan area’ (5% of housing development is directed towards ‘Elsewhere in the Plan area’). Policy 23 of the earlier local plan is the only saved policy within that plan, which allows development within development limits. As the site does not lie within any settlement limits it does not conflict with any allocations.</p> <p><u>Other Joint Minerals and Waste Plan Sites</u>: these are MJP62 (discounted) 500m west, MJP21 (allocated) 500m south, MJP33 (allocated) 1.3km south-east.</p> <p><u>Historic Minerals and Waste Sites</u>: to the south of the site lie historic applications (granted 1950s and 1990s) associated with extraction at the River Swale (400m) and Manor House Farm (immediately adjacent). Kiplin Hall extraction is adjacent to the south-east. An historic landfill site, Swale Quarry, lies 1.7km north-west, with waste disposal taking place at three locations across this site.</p> <p><u>Landscape</u>: a number of other existing and proposed quarries exist in the area; the retention of this processing plant combined with other cumulative development may have a cumulative impact upon Kiplin Hall (visual amenity, visitor experience, site traffic, etc.).</p>							

¹⁴ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Sustainability Objective	Key Observations on Significance					Score			
		P	T	D	I	S	M	L	
Limitations / data gaps	No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.								
Mitigation requirements identified through Site Assessment process									
<ul style="list-style-type: none"> • Appropriate assessment and mitigation for potential impacts to habitats and species from dust deposition and water extraction/ discharge. • Suitable arrangements for surface water drainage. • Appropriate arrangements for control of and mitigation of noise and dust. • Design to mitigate visual impacts to Kiplin Hall • Design to include suitable flood risk assessment (FRA); for an FRA to be satisfactory, it will need to include necessary mitigation, such as compensatory storage, attenuation and sustainable urban drainage as appropriate. • Appropriate restoration scheme using opportunities for habitat creation, considering Ministry of Defence safeguarding zones. 									

WJP01 – Hillcrest, Harmby

Site Name	WJP01 Hillcrest, Harmby, Richmondshire (XY 412700 489800)
Current Use	Scrap yard including end of life vehicle dismantling
Nature of Planning Proposal	Waste transfer station (including recycling) for commercial and industrial waste including construction and demolition waste
Size	0.64ha
Proposed life of site	Permanent
Notes	<p>There is no end-date specified by existing planning conditions for the existing scrap yard facility.</p> <p>WJP01 proposal likely to include a new waste transfer building at east end of site and an office facility near the site entrance.</p> <p>Site proposed as a permanent facility so no restoration proposed.</p>

SA FINDINGS SUMMARISE SIGNIFICANT EFFECTS ONLY. A WIDER RANGE OF CONSTRAINTS AND OPPORTUNITIES WERE INITIALLY ANALYSED AND DISTILLED DOWN TO ONLY THOSE WITH THE POTENTIAL TO BE SIGNIFICANT (SEE ALSO SITE ASSESSMENT METHODOLOGY SUMMARY REPORT FOR A FULL LIST OF CONSTRAINTS AND OPPORTUNITIES).

Sustainability Objective	Key Observations on Significance	Score						
		P	T	D	I	S	M	L
1. To protect and enhance biodiversity and	<p><u>Proximity of international / national and local designations and key features</u> Natura 2000: 4km- North Pennine Moors Special Area of Conservation (SAC) / Special Protection Area (SPA), 12km North Pennine Dales Meadows SAC / SPA. Six Site of Special Scientific Interest (SSSIs) within 5km. Closest to</p>		✓	✓		-	0	0

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
geo-diversity and improve habitat connectivity	<p>site is Leyburn Glebe 2.8km west of the site. Others include River Ure Grasslands 3.2km south-east, East Nidderdale Moors (Flamstone Pin-High Ruckles) 4.8km south, Thowker Corner 4.6km west, Bellerby Fields 3.5km north-west and Lovely Seat - Stainton Moor 4.1km north-west.</p> <p>9 SINC's / former Site of Importance to Nature Conservation (SINC) within 2km. Closest is Pasture at Harmby (SE18-16, Deleted SINC) adjacent to the site to the south. All other SINC's / former SINC's lie in excess of 500m from the site.</p> <p>In terms of Priority Habitat: This site is currently a scrapyard with end of life vehicle dismantling. An area of coastal and floodplain grazing marsh lies adjacent to the site to the south and an area of deciduous woodland lies circa 65m to the west.</p> <p>Ecological Networks: Site lies entirely within the Ure regional Green Infrastructure (GI) corridor.</p> <p>Local effects The site is an existing scrap yard but contains vegetated areas with tall herbs, bramble, scrub, mature trees and ruderal vegetation with potential for protected species such as roosting bats (mature trees) and nesting birds. It is considered that there may be a possible impact on protected species during the construction of the waste transfer / recycling site, particularly if mature trees are affected (there are a number of Tree Preservation Orders locally). Following construction, it is not considered that any further biodiversity impacts would arise during the operation of the site.</p> <p>This is a small site with not many restoration opportunities however things like integrating habitats into buildings and maintaining standoff from trees could be pursued.</p> <p>Plan level / regional / wider effects Considering the source of any impacts, as well as potential pathways and receptors, it is considered that there would be no significant effects on Natura 2000 sites, SSSIs or SINC's due to the type and location of development.</p>					?		

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
2. To enhance or maintain water quality and improve efficiency of water use	<p><u>Proximity of water quality / quantity receptors</u> The site is not located within a Nitrate Vulnerable Zone (NVZ) or a Groundwater Source Protection Zone (SPZ).</p> <p>Humber River Basin Management Plan (RBMP): RBMP water body 'Ure from Duerley Beck to Thornton Steward Beck' lies c. 570m east. Ecological Quality: moderate status / Chemical quality: 'does not require assessment'. No local RBMP lakes. RBMP Groundwater: 'SUNO Millstone Grit and Carboniferous Limestone': current quantitative quality - good / chemical quality - poor.</p> <p>Catchment Abstraction Management Strategies (CAMS): surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted.</p> <p><u>Local effects</u> Site is for waste transfer and recycling so potential impacts will result from construction run off, leachate from storage of waste in the transfer facility and fuel spills / run off from vehicles, which could make their way into 'Ure from Duerley Beck to Thornton waterbody. These are all expected to be readily resolvable through good site management / vehicle washing contained in a close system. Overall impacts in relation to this objective are considered to be neutral as it is assumed that the relevant environmental permits and regulations will operate effectively.</p> <p><u>Plan level / regional / wider effects</u> There is the potential pollution from the site could pass into the wider water environment via surface and groundwater pathways, however it is assumed these risks would be adequately controlled by good site management.</p>					0	0	0
3. To reduce transport miles and associated emissions from transport and	<p><u>Proximity of transport receptors</u> The site is located at distance from larger urban areas and significant sources of waste arisings. There are however, two additional waste transfer stations located within 4km. Access: confirmed to be as existing, which is onto A684 at Harmby, approximately 205m east of the junction with C42 road to Spennithorne; Light Vehicles: estimate of 1 to 2 two-way daily movements; HGV</p>		✓	✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
encourage the use of sustainable modes of transportation	<p>Vehicles: estimate of up to 10 two-way daily movements.</p> <p>Net change in daily two-way trip generation: Light vehicles: 0; HGVs: 0. Traffic assessment rating: Yellow <i>'Small scale site unlikely to result in any traffic impacts although access to the site is likely to need improving.'</i>¹⁵</p> <p>Public Right of Way (PRoW): this site is not affected by a registered public right of way.</p> <p>Rail: nearest national rail network 24km east (a private rail network lies circa.100m North); Strategic Road: A684 adjacent to the site to the north; Canal / Freight waterway: none within 20km.</p> <p>Local effects This site would generate a relatively small amount of light vehicle and HGV movements (none above the current site, so the limited number of vehicles associated with this site are a continuation of traffic). The initial Highways Assessment found that HGV movement would be acceptable onto the A684; however, works will be required to improve the existing major road and existing site access. The site is not likely to generate significant travel demand and sustainable modes of transport are considered unlikely to contribute to access to the site.</p> <p>Aside from local effects this site would be a transfer station, so it will serve a role in bulking waste from smaller to larger vehicles, this saving on net journeys, which is positive. The site may also be affected by a Highway Authority improvement scheme. Therefore there is an element of uncertainty in this assessment.</p> <p>Plan level / regional / wider effects As detailed above.</p>					?	?	?
4. To protect and improve air quality	<p>Proximity of air quality receptors No Air Quality Management Areas (AQMAs) lie within 2km and the site does not lie within a hazardous substances consent consultation zone. In terms of receptors for dust and odour Harmby lies 150m south, Spennithorne 830m south-east, Leyburn 900m west. Individual properties- Argill Farm 280m north, Property 120m north-east, Woodlands 550m north. A primary school</p>	✓		✓		-	-	-

¹⁵ Jacobs (2015); Minerals and Waste Joint Traffic Assessment – Final Traffic Assessment.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>lies 900m south-east.</p> <p>Local effects The site lies in close proximity to a number of residential receptors in Harmby village and therefore dust (from construction and vehicles travelling to / from site) and odour may be an issue. It is considered that practices such as vehicle washing could reduce this impact. Emissions would be generated by vehicles delivering waste to site and possibly by onsite operations (however this process will facilitate the bulking of waste so that it can be transported onwards in a more efficient manor). Overall it is considered the odour impacts from the facility will have a minor negative impact on nearby receptors.</p> <p>Plan level / regional / wider effects None noted.</p>							
5. To use soil and land efficiently and safeguard or enhance their quality	<p>Proximity of soil and land receptors Site is located in an area of Agricultural Land Classification (ALC) Grade 3 land however the site currently constitutes a scrap yard and end of life vehicle dismantling facility and historic maps indicate it was previously a quarry. In terms of land stability the development does not lie within or adjacent to a Coal Authority development high risk area.</p> <p>Local effects The site is currently developed and therefore no further agricultural land would be lost to the site. The proposal has been scored as neutral and is not expected to have an effect on the SA objective.</p> <p>Plan level / regional / wider effects Considered the same as local effects – neutral.</p>					0	0	0
6. Reduce the causes of climate change	<p>Proximity of factors relevant to exacerbating climate change In terms of Priority Habitat, an area of coastal and floodplain grazing marsh lies adjacent to the site to the south and an area of deciduous woodland lies circa 65m to the west. Trees are located onsite in the west and south of the site area. Various areas of woodland lie in close proximity to the site including: unnamed wood abutting south-east corner; Harmby Gill is 65m west / south-west; copse on south side of railway is 60m north; unnamed wood is 230m south-east (north of Colliwath Lane U1137).</p> <p>Local effects As climate change is a global issue effects are reported in wider effects below.</p>	✓			✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>Plan level / regional / wider effects Should the proposed development of the site lead to the removal of mature trees in the southern and western site area, this would result in a loss of carbon storage. Due to the small area involved, this would constitute a very minor negative impact. It is acknowledged that areas of woodland lie in close proximity to the site and is considered that dust deposition on leaves may lead to a minor loss of productivity; however the effect on this objective is considered to be insignificant.</p> <p>It is estimated that the site would receive between 10,000 and 15,000 tonnes of waste per annum. The site would allow waste material to be sorted and bulked up for more efficient transit or recycled, ultimately diverting waste from landfill and saving carbon emissions in waste transportation. Overall, the proposal is therefore expected to have a minor positive effect on our carbon footprints – one of the causes of climate change.</p>							
7. To respond and adapt to the effects of climate change	<p>Proximity of factors relevant to the adaptive capacity¹⁶ of a site Site is not affected by surface water flooding. Site is in Flood Zone 1. CAMS: surface water resources available at least 50% of time. At low flows new extraction licenses may be more restricted. The site lies across two 1km squares that are used to assess the likelihood / susceptibilities to groundwater flooding. The western part of the site is in an area in which >25% to <50% of land has conditions that could support Clearwater and superficial deposit groundwater flooding. The eastern part of the site is in an area of >25 to <50% of land is susceptible to superficial deposit flooding.</p> <p>Site is located in an area of ALC Grade 3 land however the site currently constitutes a scrap yard and end of life vehicle dismantling facility.</p> <p>Local effects Although there is a relatively low risk of groundwater flooding the site is on a slope which might suggest some increased vulnerability. Climate change effects on surface water flooding may impact the site in the latter Plan period; however, the level of risk is likely to be low. In addition no further agricultural land will be taken out of production nor will the site restrict the ability of neighbouring land</p>					+	+	+

¹⁶ Adaptive capacity is defined as the ability of a system to adjust to climate change to moderate potential; damage or take advantage of opportunities (adapted from CARE International, 2015. Adaptive Capacity [URL: http://www.careclimatechange.org/tk/integration/en/key_concepts/adaptive_capacity.html]

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>uses to adapt to climate change.</p> <p>Plan level / regional / wider effects The site would allow waste material to be sorted and bulked up for more efficient transit or recycled. It is expected that any future planning permission would involve a Compressive screen of planting. Positive effect mainly due to the reduction of carbon footprint¹⁷.</p>							
8. To minimise the use of resources and encourage their re-use and safeguarding	<p>Proximity of factors relevant to the resource usage of a site The site would transfer / recycle 10,000 to 15,000 tonnes of waste per annum.</p> <p>Local effects A waste transfer station (including recycling) would ultimately help to get waste to recycling and other treatment centres (assisting the circular economy by ultimately reducing resource consumption). Its indirect beneficial effect would be dependent on the final destination of the waste. However, the proposal would replace an end of vehicle life scrapyards which provides a valuable waste management service to the community. Overall, the proposal is considered to neutral in relation to this SA objective.</p> <p>Plan level / regional / wider effects See local effects above.</p>	✓			✓	0	0	0
9. To minimise waste generation and prioritise management of waste as high up the waste hierarchy as practicable	<p>Proximity of factors relevant to managing waste higher up the waste hierarchy No spatial factors identified.</p> <p>Local effects A waste transfer and recycling facility would ultimately help to get waste to recycling and other treatment centres (moving it up the waste hierarchy in most cases). Its indirect beneficial effect would be dependent on the final destination of the waste. However, the proposal would replace an end of vehicle life scrapyards which also provides a valuable waste management service to the community. Overall, the proposal is considered to be neutral in relation to this SA objective.</p> <p>Plan level / regional / wider effects See local effects above.</p>	✓		✓		0	0	0

¹⁷ Recycling reduces greenhouse gas emissions from landfill, can reduce deforestation, saves energy and produces more energy-efficient products.

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
10. To conserve or enhance the historic environment and its setting, cultural heritage and character	<p>Proximity of historic environment receptors Spennithorne Conservation Area lies 450m south-east. Constable Burton Hall (Grade II, ID 1001060) Registered Park and Garden lies 2.4km north-east. No Registered Battlefields or World Heritage Sites lie within 5km. No Scheduled Monuments lie within 2km. Five listed buildings lie within 1km (all Grade II), nearest to site- Manor House (Grade II, ID 1130934) 300m south-west.</p> <p>In terms of Historic Landscape Character (HLC), the site lies in HLC Broad Type- Enclosed Land, HLC Type- Open Field. Undesignated archaeology in this area includes former quarrying activity and evidence for medieval and later field systems.</p> <p>Local effects The HLC type of this area is open field, however, the allocation site has been characterised as such as part of a larger area even though the HLC has already been replaced by the current and previous land use as a quarry and scarp yard, and is therefore invisible. It is anticipated that there will be no effect upon HLC. It is anticipated that there will be no impact upon the archaeological resource as the proposed development is for the use of a former quarry / scarp yard, where it is assumed with a high degree of certainty that any archaeological resource has previously been destroyed.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
11. To protect and enhance the quality and character of landscapes and	<p>Proximity of landscape / townscape receptors and summary of character Yorkshire Dales National Park lies 3.2km west and Nidderdale Area of Outstanding Beauty (AONB) lies 5.2km south.</p> <p>Bolton Castle Estate Inheritance Tax Exempt land lies 2.5km west.</p>	✓		✓		-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
townscapes	<p>The site is located in Pennine Dales Fringe National Character Area (NCA). The North Yorkshire and York Landscape Character Assessment (LCA) identifies the site as 'Moors Fringe (upland, fringe and valley landscapes)' landscape character type. This area is characterised by: High visual sensitivity as a result of strong inter-visibility with adjacent higher and lower Landscape Character Types; Moderate ecological sensitivity overall as a result of the numerous small woodlands and hedgerows which provide key habitats. These have, however, been depleted in places by agricultural improvement; 'High landscape and cultural sensitivity as a result of the predominantly intact pattern of hedgerows and dry stone walls at field boundaries, the patchwork of historic designed landscapes, predominantly rural character and relatively strong sense of tranquillity. In terms of tranquillity the site is classed as 'undisturbed'.</p> <p>Local effects The site currently detracts from the setting of Harmby as it is visible on the approach from the east on the A684. Although this is a small site, it lies within the Lower Wensleydale sub-area of Richmondshire and constitutes a relatively large development in the local context. There is a former landfill site across the road, which has now been restored therefore no cumulative effects are anticipated. There are mature trees on the boundaries, with a stone wall between the site and the road. A waste transfer station could be as (or more) intrusive as the existing use as new buildings will be required, and mature trees could be damaged. However the site is largely screened from the wider landscape.</p> <p>In summary, minor negative impacts are anticipated in the short, medium and long term as it is considered that a waste transfer station would be likely to require more permanent infrastructure, areas of hard standing and may involve a more densely developed site. There is some uncertainty in this assessment until detailed site layout information is provided.</p> <p>Plan level / regional / wider effects None noted.</p>					?	?	?
12. Achieve sustainable economic	<p>Proximity of factors relevant to sustainable economic growth The site is fairly distant from larger urban areas and significant sources of waste arisings. There are, however, two additional waste transfer</p>	✓		✓	✓	+	+	+

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
growth and create and support jobs	<p>stations located within 4km.</p> <p>Local effects Whilst the site would create a limited number of employment opportunities, it would be replacing an existing facility and the jobs that it supports. It is considered that the recycling element of the site would allow value to be added to waste products, however the existing scrap yard and end of life vehicle dismantling would also allow for this.</p> <p>Plan level / regional / wider effects The site lies in close proximity to two existing waste transfer stations and would need to be considered at a plan level to determine whether a requirement exists for another facility in the area (uncertainty in the short term score). Should a requirement exist, this waste transfer station / recycling facility will be an important part of ensuring that waste can be transported to disposal or recycling / reuse in a more cost effective way. As it is considered that the site would divert waste from landfill it is considered that financial savings would be made in terms of landfill tax. Overall the impact in relation to this objective is considered to be minor positive.</p>					?		
13. Maintain and enhance the viability and vitality of local communities	<p>Proximity of factors relevant to community vitality / viability. Index of Multiple Deprivation (IMD) Area is Leyburn. This is not in the most deprived 20%. Harmby, Leyburn, Spennithorne and Middleham all lie within 2km of the site. Leyburn is identified as a Local Service Centre in the Richmondshire Local Plan Core Strategy, whilst Middleham is a Primary Service Village and Harmby and Spennithorne are Secondary Service Villages. Spatial Principle SP2 of the Core Strategy states that Local Service Centres should 'provide appropriate levels of market and affordable housing, job opportunities and assist in achieving long term economic and social sustainability'. Primary and Secondary Service Villages provide fewer services that support the needs of rural communities.</p> <p>Local effects Although this site may provide a small number of jobs (this may be offset by job opportunities that would be lost at the existing facility), it is considered that there are unlikely to be any significant benefits to local communities. The site is located in close proximity to properties and settlements including tourist facilities such as a caravan park circa 200m from the site. Whilst the site is already developed, a change of use to a waste transfer / recycling facility may have additional impacts on nearby facilities / attractions for example odour and traffic impacts. There may be some negative effects</p>	✓			✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	<p>on lives of local residents and prevent people moving to the area in the future. The site would however provide local infrastructure to enable and encourage the treatment of waste higher up the waste hierarchy. On balance, minor negative impacts may arise in relation to this objective.</p> <p>Plan level / regional / wider effects None noted.</p>							
14. To provide opportunities to enable recreation, leisure and learning	<p>Proximity to recreation, leisure and learning receptors. In terms of public rights of way, six short stretches of local footpaths lie within 250m of the site concentrated in Harmby to the south-west (closest path to site- 70m west). Site lies 80m from an area of draft common land and is entirely within the 250m buffer.</p> <p>Local effects Recreational routes in close proximity to the site are likely to be of local use / importance. A change in use of the site may impact upon users of the rights of way in different ways for example, should the new site use lead to an increase in traffic movements, odour, noise etc. These impacts are uncertain however it is considered that in comparison to the existing baseline situation, odour impacts / nuisance smell on recreation are likely to be minor negative.</p> <p>Plan level / regional / wider effects None noted.</p>	✓		✓	✓	-	-	-
						?	?	?
15. To protect and improve the wellbeing, health and safety of local communities	<p>Proximity to population / community receptors / factors relevant to health and wellbeing Nearby Populations: Harmby 150m south, Spennithorne 830m south-east, Leyburn 900m west. Individual properties- Argill Farm 280m north, Property 120m north-east, Woodlands 550m north. No hospitals, health centres or clinics within 1km. Primary school 900m south-east.</p> <p>Local effects Waste Transfer Stations can have noise, dust and odour impacts on receptors, which may affect wellbeing. The site lies in close proximity to Harmby and individual properties and therefore it is considered that a minor negative impact may result in relation to this objective.</p> <p>Plan level / regional / wider effects As detailed above.</p>	✓		✓	✓	-	-	-

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
16. To minimise flood risk and reduce the impact of flooding	<p>Proximity to flood zones The site is not affected by surface water flooding. Site is in Flood Zone 1. The site lies across two 1km squares that are used to assess the likelihood / susceptibilities to groundwater flooding. The western part of the site is in an area in which >25% to <50% of land has conditions that could support Clearwater and superficial deposit groundwater flooding. The eastern part of the site is in an area of >25 to <50% of land is susceptible to superficial deposit flooding.</p> <p>This site is not at risk from the 1:20 (5%) flood event.</p> <p>Climate change to river flood risk is unlikely to affect the site in the latter part of the Plan period. Climate change effects on surface water flooding may impact the site in the latter part of the Plan period; however, the level of risk is likely to be low.</p> <p>Local effects A Strategic Flood Risk Assessment (SFRA) Sequential Test¹⁸ undertaken for the site concluded that this site would 'Pass'. Although there is a relatively low risk of groundwater flooding the site is on a slope which might suggest some increased vulnerability. A site specific flood risk assessment is not required as this site is in Flood Zone 1 and is less than 1ha. Surface water runoff from this site should be managed using SuDS where appropriate. No significant impacts anticipated.</p> <p>Plan level / regional / wider effects None noted.</p>					0	0	0
17. To address the needs of a changing population in a sustainable and inclusive manner	<p>Proximity to factors relevant to the needs of a changing population The site does not conflict with any known allocations in other plans.</p> <p>Local effects The transfer waste will contribute to sustainable waste management, potentially benefitting the population by moving waste up the waste hierarchy.</p>					+	+	+

¹⁸ The Sequential Test approach is designed to ensure that areas at little or no risk of flooding from any source are developed in preference to areas at higher risk. The aim should be to keep development out of medium and high flood risk areas (Flood Zones 2 and 3) and other areas affected by other sources of flooding where possible

Sustainability Objective	Key Observations on Significance					Score		
		P	T	D	I	S	M	L
	Plan level / regional / wider effects None noted.							
Cumulative / Synergistic effects¹⁹								
Planning context	<p>Harmby, Leyburn, Spennithorne and Middleham all lie within 2km of the site. Leyburn is identified as a Local Service Centre in the Richmondshire Local Plan Core Strategy, whilst Middleham is a Primary Service Village and Harmby and Spennithorne are Secondary Service Villages.</p> <p>Spatial Principle SP2 of the Richmondshire Core Strategy states that Local Service Centres should 'provide appropriate levels of market and affordable housing, job opportunities and assist in achieving long term economic and social sustainability'. Primary and Secondary Service Villages provide fewer services that support the needs of rural communities. Policy 23 of the earlier local plan is the only saved policy within that plan, which allows development within development limits. As the site does not lie within any settlement limits it does not conflict with any allocations.</p> <p>No significant cumulative impacts are anticipated as a result of the development.</p>							
Other Minerals and Waste Joint Plan Sites	Other Joint Minerals and Waste Plan Sites: No other potential MWJP sites lie within 5km.							
Historic minerals and waste sites	Harmby dormant carboniferous limestone quarry (with associated historic applications) lies 500m north-west.							

¹⁹ Cumulative effects have been factored into the scoring of each SA objective in the assessment framework.

Limitations / data gaps

No significant data gaps. More detailed assessment would be required to fully evaluate a number of effects however. This should be addressed at any subsequent planning application stage.

Mitigation requirements identified through Site Assessment process

- Design to mitigate impact on ecological issues, in particular with regard to avoiding impacts on the TPO trees by the site, Harmby Beck and protected species.
- Design of development to be of a scale commensurate with the physical constraints of the site and its location adjacent to an important access route into the Yorkshire Dales National Park with landscaping of site to mitigate impact on Harmby village, users of rights of way and users of the A684 and local landscape features.
- Design to include suitable arrangements for access onto the A684 and local roads.
- Appropriate arrangements for control of and mitigation of the effects of noise, dust, odour, spillage on local residences, businesses, tourism and the community.

Contact us

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