Minerals and Waste Joint Plan

Sand and Gravel Resource Block Assessment for North Yorkshire County Council Plan Area October 2014

City of York Council
North York Moors National Park Authority
North Yorkshire County Council

SAND AND GRAVEL RESOURCE BLOCK ASSESSMENT

This paper presents an initial strategic level evaluation of potential sand and gravel resource blocks identified in work undertaken by British Geological Survey for NYCC in 2011 (Minerals and Waste Programme Commissioned Report CR/11/133) to support the evidence base for the Minerals and Waste Joint Plan. The evaluation considers the potential of the various areas of resource in terms of how they may be able to contribute to future needs for concreting sand and gravel, against a range of criteria. These criteria include;

- The size of the resource and potential quantity of resource relative to surface area
- The level of information supporting the presence of a viable resource (ie Indicative or Inferred status)
- The expected quality of resource (ie Category A or Category B)
- The presence of any major environmental constraints
- The presence of any major infrastructure constraints
- Accessibility of the site or area to likely markets
- Accessibility of the site or area to suitable transport links

Due to the large number of potential resource blocks identified in the BGS sand and gravel assessment (195 in total) and to help ensure that any blocks considered are likely to contain a resource of strategically significant scale, allowing for the application of constraints and other matters which may impact on the scale of resource actually available in any given block, the following assessment only considers those potential resource blocks where the BGS assessment suggests a minimum gross tonnage of 10mt or more, after removal of areas subject to a range of international and national designations. This approach led to the initial identification of 48 resource blocks. The number of blocks for consideration was further reduced at the outset by focussing only on those which met the 10mt threshold referred to above and which are also identified by BGS as being Category A (ie highest quality/most viable resources) and which have been identified at an indicative level (ie the greatest level of confidence). This ensures that the evaluation only focusses on those blocks with the greatest potential to deliver a substantial volume of good quality resources. A total of 15 blocks met these initial criteria. The following table summarises the evaluation carried out.

Evaluation table											
A	B	C	D	E	F	G	H	J	K	L	N
BGS resource block reference	Indicative tonnage of resource (mt)	Area of resource (ha)	Ratio of resource to area (resource/area)	Status of resource (BGS Indicative/ Inferred)	Grade of resource (BGS A or B)	Sand and gravel North or South landbank?	Is there likely to be sufficient unconstrained resource, based on the presence of major, readily identifiable physical constraints, to allow minerals extraction on a significant scale? Yes = substantial areas of the resource are free from major physical constraints to development No = substantial parts of the resource are subject to major physical constraints to development Uncertain = it is not clear at this stage the extent to which physical constraints might preclude working of the resource	Accessibility to major road network (judgement of overall accessibility of the resource in relation to suitable road network) Good = the resource is located in relatively close proximity to the strategic road network Moderate = the resource is located a significant distance from the strategic road network such that accessibility is likely to be a significant constraint Poor = the resource is located far from the strategic road network such that accessibility is likely to be a fundamental constraint	Proximity to market (overall accessibility of resource to likely main market areas) Good = within 10km radius of major urban centre Moderate = 10-30km of major urban centre Poor = more than 30km from major urban centre Where a location is of moderate accessibility to more than one urban centre then status is elevated to good	Any proposed sand and gravel site allocations within block? (yes or no)	overall conclusion on relative potential
33	36	540	0.067	Indicated	A	S A59 between Knaresborough and Flaxby	Yes	Good	Good	No	High
45	59	544	0.108	Indicated	A	S Masham	Yes	Good	Moderate	Yes (now subject of resolution to grant permission)	High

50	19	191	0.099	Indicated	A	N Leeming	Uncertain	Good	Moderate	Yes	Medium
51	86	1021	0.084	Indicated	A	N Langthorne	Yes	Good	Moderate	Yes	High
80	40	376	0.106	Indicated	A	N Stokesley north	Uncertain	Good	Good	No	Medium
99	15	150	0.100	Indicated	A	S A59/A1 junction	No	Good	Good	No	Low
123	29	515	0.056	Indicated	A	S South of Bedale	Yes	Good	Moderate	No	High
131	21	157	0.134	Indicated	A	S Asenby	Yes	Good	Good	Yes	High
134	17	237	0.072	Indicated	A	N East Cowton	Yes	Good	Good	No	High
172	59	746	0.079	Indicated	A	S Thornborough	Yes	Good	Moderate	Yes	High
173	12	228	0.053	Indicated	A	S Burton Leonard	Yes	Good	Good	No	High
89	11	139	0.079	Indicated	A	N Stokesley east	Uncertain	Good	Good	No	Medium
60	35	510	0.069	Indicated	A	N Kirkby Fleetham	Yes	Good	Moderate	Yes	High
72	70	533	0.131	Indicated	A	S E of Ripon	Uncertain	Good	Moderate	Yes	Medium
194	17	187	0.091	Indicated	A	N Stokesley south east	Uncertain	Good	Good	No	Medium
Total Indicated Cat A	**526**	**6074**	**0.087**								

Commentary on Table

Column A - Resource block ID number from North Yorkshire Sand and Gravel Assessment (BGS 2011).

Column B - Indicative overall tonnage after removal of urban areas, mineral planning permissions, SPA, SAC, Ramsar, AONB, SSSI, NNR, Historic Park and Gardens, Scheduled Ancient Monuments and Registered Battlefields. The Table only addresses those areas of potential resource identified through the BGS sand and gravel assessment 2011where total theoretical resources, after removal of areas subject to previous mineral working and major (international and national designations), is 10mt or greater. This is to ensure that areas under consideration have a reasonable prospect of containing resources on a significant scale, bearing in mind that the actual scale of resources in any block is not known with a high degree of certainty, that other constraints such as surface infrastructure, the presence of lower level environmental and other constraints, the irregular configuration of resource blocks, the need for stand-offs from other development in proximity and the potential presence of interburden and other resource related factors, may all reduce the actual scale of any potentially viable resource. BGS suggest that factors such as these could reduce the actual scale of resource available by up to 20%, although the Council considers that, for some resource blocks, the scale of potential reduction could be significantly greater than this.

Column C - Overall area of resource in block, after removal of constraints identified in B. above

Column D - Tonnage of resource divided by surface area. This ratio gives an indication of the relative depth of the deposit in each block and the relative scale of landtake required for the given tonnage. A higher figure indicates a smaller surface area relative to tonnage of resource.

Column E - Status of resource. *Indicated* resources are those for which tonnage, densities, shape, physical characteristics, grade and mineral content can be estimated with a reasonable level of accuracy. By contrast *Inferred* resources (not included in the above table) are those resources for which tonnage, grade and mineral content can be estimated with a low level of confidence.

Column F - Grade of resource. The North Yorkshire Sand and Gravel Assessment (BGS 2011) subdivided potential resources into two main categories, based on viability criteria defined in consultation with the minerals industry. Category A resources meet more stringent criteria and hence, other things being equal, are likely to be preferred for development. In practice a range of

considerations may influence industry decisions on viability; for example extensions to existing sites may be more viable with less stringent criteria because the scale of new investment required is often considerably less.

Column G - Location of resource block in relation to previously applied North Yorkshire Minerals Local Plan “northwards” and “southwards” landbank areas for sand and gravel. The landbank has previously been subdivided in this way to reflect the fact that sites in the northern most part of the County tend to supply a significant proportion of sales northwards to markets in Teesside and County Durham, whereas sites elsewhere in North Yorkshire tend to serve markets internally within North Yorkshire, or southwards to West and South Yorkshire. For the purposes of this exercise, resource blocks located predominantly to the north of the A684 have been identified as in the northwards area. In practice a number of factors are likely to influence the location of markets served, including commercial decisions by operators.

Column H - This column provides a basic assessment of the extent to which major surface development/infrastructure may constrain the availability of resource within the block, for example as a result of the presence of features such as roads, railways, buildings. In many cases larger resource blocks are likely to have greater potential for the development of sites free from constraints. A “Yes” entry in the column indicates that it is expected, based on an initial desk-based assessment, that there is likely to be scope to develop a site or sites on a significant scale, taking into account the presence of surface infrastructure constraints. An “uncertain” entry indicates that it is less clear that the block has the potential for the identification of sites sufficiently clear of surface infrastructure constraints.

Column J - Accessibility to major road network. This column provides a judgement of the relative accessibility of a resource block to the main highway network, which is likely to be a significant factor in determining the potential suitability of any resources for future working. In practice, more local highway considerations will also be important in determining the potential suitability of mineral working but cannot be assessed at this stage. In practice, the large majority of resource blocks in excess of 10mt are in relatively close proximity to the strategic road network and this criterion provides little differentiation at this stage.

Column K - Proximity to market (overall accessibility of resource to likely main markets). This column provides a general indication of the relative accessibility of resource blocks to major urban areas in and around North Yorkshire and which are likely to be locations of demand for sand and gravel. In practice a number of factors are likely to determine the distribution of aggregate sales

and these may vary over time. The use of major urban areas as a proxy for important fixed locations of demand is considered appropriate in the absence of more detailed knowledge and may help reflect the benefits of ensuring an appropriate fit between locations of supply and demand. It is recognised that the radii from urban centres do not reflect drive-times but, in combination with Criterion J (Accessibility to principal or strategic road network) is considered to provide a reasonable general indication of the relationship between resource location and key sources of demand.

Column L - This column indicates whether any proposed allocations for sand and gravel working have been put forward within the relevant block during previous calls for submission of sites. The presence of a proposed allocation within a block may provide supporting evidence of the existence of a potentially viable resource within it.

Column N - Overall judgement on the relative potential of the resource block to deliver supply of aggregate. This is a strategic level judgement. More specific, detailed or local factors may influence the actual potential for development in any particular block.

Contact us

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