





Minerals and Waste Joint Plan

Site Assessment

Interpretation of Level 1 SFRA sequential test findings

October 2016

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1.0 Introduction

- 1.1 A Level 1 Strategic Flood Risk Assessment (SFRA) has been prepared to support preparation of the Minerals and Waste Joint Plan (MWJP). The findings and recommendations of the sequential testing of sites, in relation to flood risk, have been reviewed as part of the site assessment process so that relevant matters are addressed and that the selection of sites has been informed by the SFRA process.
- 1.2 The SFRA sequential testing was prepared by Mouchel on behalf of the Joint Plan authorities and is available in the evidence base for the Joint Plan. This further supporting paper has been produced by the Joint Plan authorities, drawing on the findings of the Level 1 SFRA sequential testing, in order to set out how sequential testing has helped to inform the allocation of sites in the Joint Plan.

2.0 Minerals site allocations

- 2.1 In order to consider the outcome of sequential testing of site allocations for minerals, it is necessary to group them by the type of mineral resource within the site, in order that a meaningful comparison between sites is made. Minerals sites are therefore considered in relation to the following groupings:
- Sand and gravel (northwards distribution)
- Sand and gravel (southwards distribution)
- Building sand
- Magnesian Limestone
- Clay
- Jurassic Limestone
- Building stone
- Aggregates import and handling facility
- 2.2 For both Jurassic Limestone and Building stone, the site assessment process has resulted in only one site being considered suitable for allocation, and therefore no comparison with other sites of the same mineral type was possible. For sand and gravel, it

was considered appropriate to group these into northwards and southwards distribution areas, reflecting the strategic approach to sand and gravel supply contained in the Plan.

- 3.0 Sand and gravel northwards distribution area
- 3.1 Only three sites are considered suitable for allocation in the Plan in this area and are all considered necessary in order to meet identified requirements for sand and gravel. Sand and gravel extraction is considered to be 'water compatible' development in terms of the NPPF flood risk vulnerability classification. Of the three sites considered suitable for allocation, the sequential test indicated the following order of preference:
- MJP17 Land South of Catterick
- MJP21 Land at Killerby
- MJP33 Land at Home Farm, Kirby Fleetham
- 3.2 As suitable alternatives to these sites have not been identified through the site assessment process, there are no sequentially preferable sites which could be allocated in place of some or all of these sites to meet the identified requirements. In each case the outcome of the sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation, provided in Appendix 1 to the MWJP.
- 4.0 Sand and gravel southwards distribution area
- 4.1 Three sites or areas are considered suitable for allocation in the southwards distribution area and all are considered necessary in order to contribute to future requirements. Sand and gravel extraction is considered to be 'water compatible' development in terms of the NPPF flood risk vulnerability classification. The sequential test indicated the following order of preference:
- MJP06 Langwith Hall Farm
- MJP07 Oaklands, near Well
- MJP14 Ripon Quarry (Pennycrofts and Thorneyfields Land)
- 4.2 As suitable alternatives to these sites have not been identified through the site assessment process, there are no sequentially preferable sites which could be allocated in place of some or all of these sites to meet the identified requirements. In each case the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 5.0 Building sand
- 5.1 Four sites were considered suitable for allocation and all are necessary in order to meet future requirements. As a form of sand and gravel, extraction of building sand is water compatible development. The sequential test indicated the following order of preference:
- MJP30 Land at West Heslerton

- MJP44 Land between Plasmor Blockworks and Pollington Airfield
- MJP54 Land at Mill Balk Quarry, Great Heck

MJP22 - Hensall Quarry

- 5.2 As suitable alternatives to these sites have not been identified through the site assessment process there are no sequentially preferable sites which could be allocated in place of some or all of these sites to meet the identified requirements. In each case the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 6.0 Magnesian Limestone
- 6.1 Five sites were considered suitable for allocation and necessary in order to contribute to future requirements. Quarrying for Magnesian Limestone is classed as a 'less vulnerable' form of development in the NPPF flood risk vulnerability classification. The sequential test indicated the following order of preference:
- MJP28 Barnsdale Bar Quarry, Kirk Smeaton
- MJP23 Jackdaw Crag south quarry and MJP29 Went Edge Quarry, Kirk Smeaton (ranked equally)
- MJP11 Gebdykes Quarry
- MJP10 Potgate Quarry
- 6.2 As suitable alternatives to these sites have not been identified through the site assessment process there are no sequentially preferable sites which could be allocated in place of some or all of these sites to contribute to the identified requirements. In each case the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

7.0 Clay

- 7.1 Extraction of clay is a 'less vulnerable' form of development in the NPPF flood risk vulnerability classification. Three sites were considered suitable for allocation. Two of these (MJP45 land north of Hemingbrough) and MJP55 (land adjacent to former Escrick Brickworks) were proposed in order to meet specific needs for clay to support existing manufacturing facilities at the Plasmor Blockworks site in Selby District. The third site, MJP52 (land at Duttons Farm, near York) was proposed as a general source of supply of engineering clay and is not considered a direct alternative to the MJP45 and MJP55 sites. The sequential test indicated the following order of preference:
- MJP45 land north of Hemingbrough
- MJP55 land adjacent to former Escrick Brickworks
- MJP 52 land at Duttons Farm

- 7.2 As both the MJP45 and MJP55 sites have been put forward to meet requirements for supply of clay to Plasmor Blockworks, and MJP45, land north of Hemingbrough is considered preferable in flood risk terms to the MJP55 site, the Plan gives preference to working of MJP45 above MJP55 through the requirements of the clay supply policy in the Joint Plan. In each case the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 7.3 The sequential testing of MJP52 indicates that the site boundary should be amended to exclude land within flood zone 3 and this is reflected in the map accompanying the allocation in Appendix 1 of the Joint plan.
- 7.4 The outcome of sequential testing also indicated that, in order for this site to pass the test, further consideration should be given to the site's contribution to the supply of minerals. In this respect the following considerations are relevant:
- 7.5 There are no current sources of supply of clay in the Joint Plan area specifically for general engineering purposes (as opposed to sources of supply serving specific manufacturing facilities at the Plasmor Blockworks and Alne Brickworks sites). No other proposed sources of supply were put forward for consideration during preparation of the Plan. Provision of a source of supply within the Plan area would help reduce reliance on importation of clay and help support the provision of sources of supply of minerals in proximity to where they are used, which is an objective of the Plan. In this respect the MJP52 site is located in close proximity to the City of York which, as the largest urban area in the Plan area is likely to represent a key source of demand. It is therefore considered that allocation of the site is justified in the context of the results of the sequential test.

8.0 Jurassic Limestone

8.1 Extraction of limestone is a 'less vulnerable' form of development in the NPPF flood risk vulnerability classification. Only one site (MJP08 Settrington Quarry) was considered suitable for allocation in the Joint Plan. As a result there are no suitable alternatives available which may be preferable in terms of flood risk. Sequential testing of the MJP08 site did not indicate any basis to exclude the allocation on grounds of flood risk. The outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

9.0 Building stone

9.1 Extraction of Building stone is a 'less vulnerable' form of development in the NPPF flood risk vulnerability classification. Only one site (MJP63 Brows Quarry) was considered suitable for allocation in the Joint Plan. As a result there are no suitable alternatives available which may be preferable in terms of flood risk. Sequential testing of the MJP63 site did not indicate any basis to exclude the allocation on grounds of flood risk. The outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

- 10.0 Aggregates rail import and handling facility
- 10.1 A proposed allocation for this use was proposed during preparation of the Plan (MJP09 Barlby Road, Selby). The site is already in use for this purpose but the proposed allocation is sought to retain the use in the longer term. No alternative sites for this specific form of use have been put forward. The use is classed as 'less vulnerable' in the flood risk classification system. The site is within flood zone 3 but is not defined as functional flood plain in the Selby SFRA. The site is located in an area protected by flood defences.
- 10.1 Use of more sustainable transport modes, including for transport of bulk materials, is supported in national policy and the Joint Plan. Opportunities for rail transport of minerals in the Plan area are very limited and it is considered appropriate to support the continued use of the site for this purpose in order to help maintain security of supply of aggregate in a sustainable manner. The outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

11.0 Waste Site Allocations

- 11.1 The level 1 SFRA compared flood risk across broad groupings of waste sites. To further consider the potential for alternatives of lower flood risk vulnerability, this annexe considers proposed allocations across a refined range of groupings, to help to ensure an appropriate level of comparison.
- 11.2 Inert landfill
- 11.3 These forms of development are classified as 'more vulnerable' to flooding. Three sites put forward for inert landfill were considered suitable for allocation in the Plan, in order to help meet an identified capacity gap for landfill of CD&E waste. Of these, WJP21 (Brotherton Quarry) is sequentially the most preferable as it is located in flood zone 1. WJP05 (Field north of Duttons Farm, Upper Poppleton) and WJP06 (Land adjacent to former Escrick Brickworks) both contain areas of Flood Zones 2 and 3. Of these WJP05 is considered sequentially preferable to W06. Proposed allocation boundaries for WJP05 and WJP06 have been revised to exclude areas in Flood Zone 3. It is considered necessary to allocate both the sites for landfill in order to provide opportunities to meet identified future requirements for landfill, and to facilitate reclamation following proposed minerals extraction (subject of separate proposed allocations). For each site the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 11.4 Waste sites including biodegradeable landfill

- 11.5 This form of development is classified as 'more vulnerable' to flooding. Two sites which include an element of biodegradeable landfill were considered suitable for allocation, in order to help maintain capacity at existing permitted sites with time limited planning permissions. Both these sites (WJP08 land at Allerton Park near Knaresborough) and WJP11 (Harewood Whin, Rufforth) also proposed a range of other waste uses. Site WJP08 is sequentially preferable to WJP11, which contains small area of flood zones 2 and 3. The proposed allocation boundary for WJP11 has been revised to exclude land within flood zone 3. The Harewood Whin site is considered to be a strategically important location for the management of waste, containing a variety of existing waste uses but which is subject to a time limited planning permission which expires in the early part of the Plan period. It is located in close proximity to York, as a major source of waste arisings, and therefore helps deliver the objective of ensuring that waste facilities are well located in relation to sources of arisings. For each site the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 12.0 Sites for large scale energy recovery (including through anaerobic digestion)
- 12.1 These forms of development are classified as 'less vulnerable' in the flood risk classification system. Three sites are considered suitable for allocation for these uses: WJP03 (Southmoor Energy Centre), WJP25 (Former ARBRE power station site) and WJP02 (Former North Selby Mine site, Deighton). All three sites have the benefit of planning permission for the proposed use but the permissions are currently unimplemented. Of these three sites, WJP25 is considered to be sequentially the most preferable, followed by WJP03 and then WJP02. It is considered appropriate to allocate all three sites in the Plan in order to provide a range of opportunities for recovery of waste. Sequential testing of all three sites did not indicate any grounds to exclude the site on grounds of flood risk, or require further justification in terms of impact on flood risk. For each site the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.
- 13.0 Sites for inert waste recycling
- 13.1 These forms of development are classified as 'less vulnerable' in the flood risk classification system. Five sites were considered suitable for allocation for this form of use: WJP10 (Went Edge Quarry), WJP24 Land at Potgate (former pant site), WJP05 (Field north of Duttons Farm, Upper Poppleton), MJP26 (Barnsdale Bar Quarry), MJP27 (Darrington Quarry). Of these sites, all are wholly located in flood zone 1 apart from WJP05, of which 85% lies within flood zone 1. Areas of flood zone 3 have been excluded from the allocation boundary. Movement of waste up the waste hierarchy through increased recycling is an objective of national policy in the Joint Plan and a capacity gap for recycling of C&D waste has been identified in evidence work to support the Plan. It is considered appropriate to allocate all these sites in the Plan. For each site the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

14.0 Other waste sites

- 14.1 A range of other sites are proposed for allocation. These include WJP13 (Halton East Quarry, near Skipton), WJP17 (Skibeden, near Skipton), WJP15 (Seamer Carr, Eastfield, near Scarborough), WJP16 (land at Burn Airfield), WJP22 (Land on former Pollington Airfield), WJP19 (Fairfield Road, Whitby) and WJP18 (Tancred, near Scorton). These sites are proposed for a range of waste uses and are not considered to be directly comparable with each other or with other waste sites proposed for allocation. All these sites are proposed for 'less vulnerable' uses in the flood risk classification system. The level 1 SFRA shows that WJP13, WJP17 and WJP19 are wholly within flood zone 1. WJP22 has areas of flood zones 2 and 3 on its south western boundary although the very large majority of the site is flood zone 1. Similarly, WJP15 is nearly all flood zone 1, although there are small areas of zones 2 and 3 which, as a result of the SFRA, have been excluded from the allocation area. WJP16 is located within flood zone 2 although the SFRA has not indicated a requirement for further justification for the allocation of the site, in terms of flood risk. A direct alternative to this site has not been put forward for consideration.
- 14.2 Approximately 85% of the area of site WJP18 is located within flood zones 2 and 3. The proposed allocation is to allow retention of an existing waste management facility subject of a planning permission which will expire during the plan period. The North West Yorkshire SFRA is in the process of being revised therefore the Level 1 SFRA considers the extent of functional flood plain in this area as indicative at this stage. The Level 1 SFRA also indicates that site specific flood risk assessment should establish whether the area marked as being at 1:20 flood risk is part of the functional flood plain and recommends that, if so, the area should be avoided. It is therefore considered appropriate to retain the allocation at this stage in order that more detailed assessment can take place in the light of updated information.
- 14.3 For each site, including WJP18, the outcome of sequential testing recommended a range of measures to mitigate flood risk at project stage and these have been incorporated as development requirements into recommendations for mitigation provided in Appendix 1 of the MWJP.

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