

**DERBYSHIRE COUNTY COUNCIL AND DERBY CITY COUNCIL
MINERALS LOCAL PLAN**

**SAND AND GRAVEL SITES
SITE ASSESSMENTS**

MAY 2016

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Introduction and Background

The National Planning Policy Framework (NPPF) sets out that mineral planning authorities (MPAs) should make provision for the continued extraction of mineral resources of local and national importance. Sand and gravel is an aggregate mineral of both local and national importance, of which there are proven resources in Derbyshire and Derby. In terms of aggregate, the NPPF states that MPAs must plan for a steady and adequate supply through the preparation of a Local Aggregate Assessment (LAA), which will identify the amount of aggregate that will be required to be provided over the Plan period. The Derbyshire, Derby and Peak District LAA (2015) has identified a need for a further 3.75 million tonnes of sand and gravel to be provided from Derbyshire and Derby over the Plan period to 2030. The Minerals Local Plan will allocate sites to provide for this.

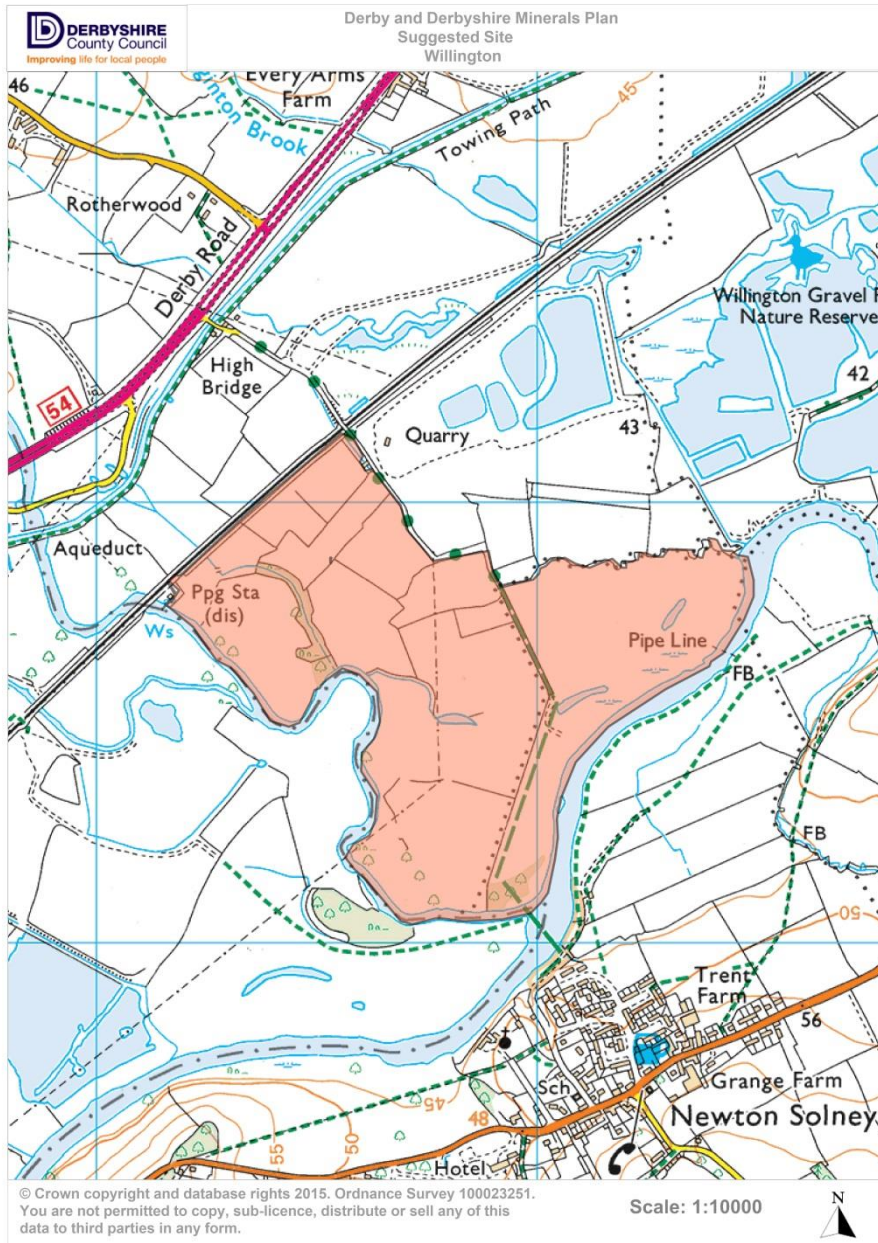
This paper sets out illustrative assessments of all seven sites that have been put forward as potential allocations for sand and gravel working in the Minerals Local Plan. These are based on the draft site assessment methodology that is being published alongside this paper. Originally ten sites were put forward but two have been withdrawn and another has now has the benefit of planning permission.

1.1 Willington

Site Name: Willington
Reference Number: SG01
Proposed By: Cemex

BACKGROUND

Site Location



Location and General Description of Site

- 1.1.1 This is a proposed extension to the currently active Willington pit. This 64 hectare site is located in the Trent Valley on the Derbyshire/Staffordshire border, one mile to the south-west of the village of Willington. Both parts are currently in agricultural use, predominantly for grazing livestock.
- 1.1.2 Derbyshire County Council received a formal planning application for an extension to the existing quarry in July 2015, involving extraction in two parts of this site (34ha in total yielding a potential 2.07 mt) and the retention of the existing processing plant and ancillary facilities. This was approved in September 2016.

Resources (yield, annual output, depth of deposit)

- 1.1.3 This site is estimated to have a yield of approx. 2.85 million tonnes of sand & gravel from deposits between 3m and 6m in depth. Assuming an extraction area (taking account of stand-offs) of around 55 hectares, yield per hectare would be around 50,000 tonnes. There is an average overburden of 1.5m depth. It would have a lifespan of around 10 years. This equates to an annual output from the site of around 250,000-300,000 tonnes.

End Use of, and Market for, Mineral

- 1.1.4 Processed material is likely to continue to be used for building sand and in the manufacture of ready mixed concrete and sold within a 25 mile radius of the site.

Timing and Phasing

- 1.1.5 The operator states that production could commence in 2017 and would enable the quarry to remain productive after the completion of operations within the existing quarry area. The proposed development, including restoration, would be completed in an estimated 10 years.

Plant and Access Arrangements

- 1.1.6 All operations for the existing quarry and the proposed extension would continue to be accessed using the existing long access road to the A5132. The existing processing plant on the adjacent operational site would also be used for the duration of the proposed extension period.

Site History

- 1.1.7 Mineral extraction in the vicinity of the site has been undertaken in a piecemeal manner by a number of operators since the 1960s, although it is only since the late 1980s that the site has developed into a permanent quarry with associated infrastructure. Permissions for the extraction of sand and gravel from land off High Bridge Lane and to the south-west of Castle Way were granted in 1966 and 1991 respectively and these areas have now been worked out. The former area is now the location of the quarry plant and silt lagoons.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.1.8 This proposal would utilise the existing quarry infrastructure.

ASSESSMENT (+) Use of existing quarry infrastructure

Sterilisation of Resources

- 1.1.9 The operation would continue the extraction of mineral using existing infrastructure

ASSESSMENT (+) Continued use of mineral resources using existing infrastructure

1.1.10 Employment

The operation would use existing employees from the existing quarry

ASSESSMENT (+) Retention of employees

Infrastructure - Access Arrangements to the Site

1.1.11 There is an existing access/haul road from the site through previous working areas to the A5132. This will continue to be used.

ASSESSMENT (+) The site will be accessed by an A road

Resources/Yield

1.1.12 The company estimates that the site would yield around 2.07 million tonnes of sand and gravel from an extraction area of 34 hectares. This equates to around 60,000 tonnes per hectare.

ASSESSMENT (+) Yield of 50,000 – 75,000 tph

Transport – Distance to Markets

1.1.13 The company intends that processed material would be sold to the same markets as for the existing operation i.e. within 25 miles of the quarry.

ASSESSMENT (+) Distance to markets 20-25 miles

Transport – Mode of Transport to Market

1.1.14 The operator has confirmed that the processed material would be transported by road.

ASSESSMENT (-) Road transport proposed

ECONOMIC TOTAL 20/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)

1.1.15 This site cannot be seen easily from any residential or other property, although some properties in Newton Solney may have views of the southernmost part of the site from across the river. The north-western section can be seen from the railway and the majority of the site is visible from High Bridge Lane (a green lane and public footpath) which follows the north-eastern boundary of the site and then southwards through the southern part of the site. Overall, the site has few visual receptors, but large parts of the site are visible from public routes.

ASSESSMENT (+) The site has few visually sensitive receptors but large parts of the site will be visible from them

Noise

1.1.16 There are only a small number of individual residential properties to the north of the site along the A38 but it is not considered that they would be affected to any greater degree than they are by the current operation, which operates within the required noise guidelines.

ASSESSMENT (+) The site has few noise sensitive receptors within 500m of the boundary of the site

Nuisance Dust

- 1.1.17 There are only a small number of individual residential properties within 500m of the site, but the moist nature of the material on extraction and methods of working would reduce the impact of dust in any case.

ASSESSMENT (+) The site has few medium/dust sensitive receptors within 500m of the boundary of the site

Air Quality/Human Health

- 1.1.18 There are no Air Quality Management Areas in the vicinity of this site.

ASSESSMENT (+) Site does not lie within 1000m of an AQMA

Transport – Local Amenity

- 1.1.19 HGVs would not have to pass through residential areas to reach the primary road network.

ASSESSMENT (+) HGVs would pass few sensitive receptors to reach the main market areas

Benefits from the Proposed After-Use

- 1.1.20 It is not considered that the working of this area and its subsequent reclamation to mainly water end-uses would result in any significant environmental benefits. Existing habitats are already intact. There may be some community benefits from the proposed water-based nature conservation element of the restoration scheme. Economic benefits from the restoration scheme would appear to be limited although if recreational water uses are proposed, this may lead to the creation of some jobs and visitor spending.

ASSESSMENT (+) Some benefits from the proposed after-use

Cumulative Impact

- 1.1.21 There are existing mineral workings in the area and have been for a significant number of years.

ASSESSMENT (--) Impacts from past and existing mineral workings

Airport Safeguarding Birdstrike Issue – Potential Risk to Aircraft Safety

- 1.1.22 This site lies outside the EMA 13km zone but partly inside the Derby Aerodrome 3km zone.

ASSESSMENT (+) The site lies within an area where there is a medium potential for birdstrike

SOCIAL TOTAL 22/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment – Flooding

- 1.1.23 The site lies within an area classified as Flood Zone 3. Such areas have the highest probability of flooding. A Flood Risk Assessment is being considered for this site by the EA.

ASSESSMENT (--) Site lies within flood zone 3 - high probability of flooding

Water Environment – Groundwater

- 1.1.24 This site does not lie within a Groundwater Protection Zone.
ASSESSMENT (+) Site lies outside a groundwater protection zone
- Water Environment – Aquifer Protection**
- 1.1.25 This site lies on a secondary aquifer.
ASSESSMENT (-) Site lies on a secondary aquifer.
- Ecology – Existing Impacts from Mineral Extraction**
- 1.1.26 Widespread impacts on north-east side, but major losses have been/will be arable land.
ASSESSMENT (+) Localised, but moderate to high, impacts on habitats
- Ecology - UK, regional and local BAPs priority habitats and species**
- 1.1.27 Significant area of unimproved pasture, dense watercourse trees, and pollarded willows, water filled channels. There are mature trees on High Bridge Lane, including a rare black poplar, a former stream course, willows and alders.
ASSESSMENT (--) Extensive areas of positive ecological value, including UK priority habitats or species which should be considered for protection/conservation
- Ecology - Ecological Coherence/Natural Areas, Wildlife Corridors/Linkages**
- 1.1.28 Area is cut off from similar habitat by railway and other workings but internally has strong coherence and strong coherence with the Rivers Trent and Dove. There is a good assemblage of characteristic features of the Natural Area in a quiet area.
ASSESSMENT (--) The site accords with the established habitats over a wider area and habitat pattern is strong
- Ecology - Habitat Creation**
- 1.1.29 Existing habitats are intact and there is a limited requirement for biodiversity enhancement within the site.
ASSESSMENT (-/--) Existing habitats are intact and make a strong contribution to priority biodiversity targets for conservation and there is strong ecological coherence within the site; habitat creation would not enhance the site or the wider area
- Landscape and Visual Amenity - Existing Impacts**
- 1.1.30 The site is located east of Hilton and lies outside the Sherwood Sandstone area. There is a high, widespread impact from existing mineral extraction on the north-east section of the site, although it does not impact on the majority of the site.
ASSESSMENT (+) There are localised, moderate to high, impacts associated with past mineral extraction
- Landscape and Visual Amenity - Existing Infrastructure**
- 1.1.31 There is an active plant and associated infrastructure directly adjacent to the site which could be utilised by the proposed site with potentially only slight adverse effects.
ASSESSMENT (+) There is existing infrastructure within the vicinity of the proposed site that could be connected to with only slight adverse effects
- Landscape and Visual Amenity - Strength of Landscape Character**
- 1.1.32 South-west of Willington and south of the Trent and Mersey Canal and railway line, the site strongly accords the established landscape character. There has been some loss of hedgerows and arable land in the north-east section. However, there is still a significant section of intact unimproved pasture, dense watercourse trees, and pollarded willows. There is a green lane/ bridleway which bisects the site then traverses the south-western

side of the site towards the River. There is a visually distinct former stream course and parish boundary lined with willows and alders (potential veterans). The southern section of the site is shown as Hargate Common Pasture on the 1849 tithe map, which would account for the lack of field enclosure in this area. There are linear water areas adjacent to the river, which are possibly cut off oxbow lakes. The site accords with the established *Riverside Meadows* landscape character and is generally in good condition.

ASSESSMENT (--) The site accords with the established landscape character and is in good condition

Landscape and Visual Amenity - Visual Impact

- 1.1.33 The former Hargate Common Pasture is potentially visible from parts of Newton Solney across the river to the south. Several parts of the site will be visible from the lane which crosses the site. The site has few visual receptors but large parts of the site are visible.

ASSESSMENT (+) The site has few visual receptors but large parts of the site will be visible

Historic Environment - Designated sites & settings

- 1.1.34 None in the area.

ASSESSMENT (+) No perceivable impact on a designation

Historic Environment – Archaeological Environment

- 1.1.35 Fairly extensive areas of visible ridge and furrow. Several known palaeochannels with a major channel still containing areas of water. Major potential for well-preserved organic remains.

ASSESSMENT (-) Frequent, visible and interpretable earthworks and some known archaeology with significant potential for buried remains

Historic Environment - Historic Landscapes

- 1.1.36 Field pattern suggestive of enclosure of strip fields and relatively unchanged since mid-19th century. Field pattern could be much earlier.

ASSESSMENT (--) Evidence of multi period landscape and intact field pattern

Best and Most Versatile Agricultural Land

- 1.1.37 The majority of this site lies within an area where 20%-60% of the land is likely to be best and most versatile agricultural land (bmv).

ASSESSMENT (+) The site lies within an area where there is a moderate likelihood of bmv land

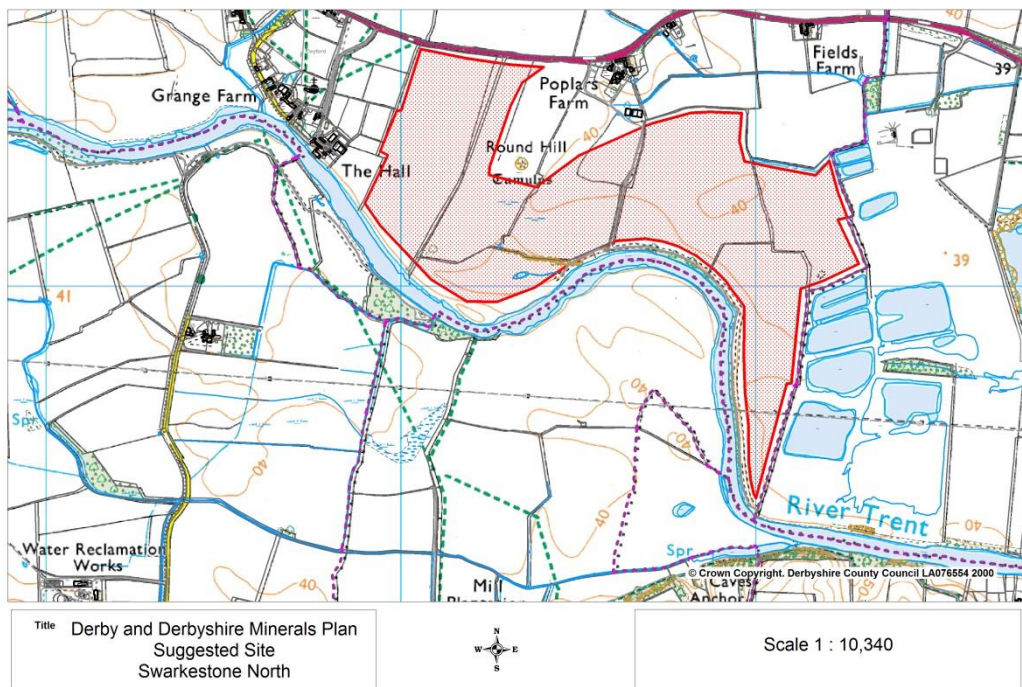
ENVIRONMENTAL TOTAL = 31/56 (M)

1.2 Swarkestone North

Site Name: Swarkestone North
Reference Number: SG02
Proposed By: Tarmac

BACKGROUND

Site Location



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Location and General Description of Site

- 1.2.1 This is a proposed extension to the active Swarkestone pit. The site is 100 hectares in size and is situated between the existing pit to the east and Twyford village to the west. The River Trent forms the southern boundary of the site and the A5132 the northern boundary. It is generally level, open terrain, being within the floodplain of the River Trent. It is currently in agricultural use with a mix of arable and grazing uses.

Resources (yield, annual output, depth of deposit)

- 1.2.2 It is estimated that this site would yield **4.5 million tonnes** of sand and gravel from deposits with an average depth of **4 metres**. Deposits have been classified as being of medium to high quality. The operator estimates that the annual output would be **300,000 tonnes** over a **15 year** period.

End Use of, and Market for, Mineral

- 1.2.3 The processed material would be used in the manufacture of ready mixed concrete, pipes, roof tiles, slabs and other concrete products, to markets which are generally within a 25 mile radius of the site.

Timing and Phasing

- 1.2.4 The operations could begin on completion of the current pit around 2020, with the site having an estimated lifespan of approximately 15 years.

Plant and Access Arrangements

- 1.2.5 It is proposed to utilise the existing processing plant and access road. The access joins the A5132 and lorries would generally then travel east onto the A514 before joining the A50. The normal operating capacity of the processing plant would be 300,000 tonnes of material per annum.

Relevant History

- 1.2.6 No specific planning history for this site although it was assessed by the MPA in 1993 for inclusion in the current adopted Minerals Local Plan but was not carried forward for further consideration because the permitted site contained sufficient reserves to sustain production at this operation for that plan period to 2006.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.2.7 This proposal would utilise the existing quarry infrastructure.

ASSESSMENT (+) Use of existing quarry infrastructure

Sterilisation of Resources

- 1.2.8 The operation would continue the extraction of mineral using existing infrastructure

ASSESSMENT (+) Continued use of mineral resources using existing infrastructure

- 1.2.9 **Employment**

The operation would use existing employees from the existing quarry

ASSESSMENT (+) Retention of employees

Access Arrangements to the Site

- 1.2.10 The operator has confirmed that the proposed extension would utilise the access of the existing adjacent operation which is direct onto the A5132. The Highways Authority (Derbyshire County Council) has assessed this as being acceptable in principle, provided there is not a material increase in vehicle movements.

ASSESSMENT (+) The site will be accessed by an A road

Resources/Yield

- 1.2.11 It is estimated that this site would yield 4.5 million tonnes of sand and gravel from an extraction area of 70 hectares. This equates to over 64,000 tph.

ASSESSMENT (+) Yield of 50,000-75,000 tph

Transport – Mode of Transport to Market

- 1.2.12 The company has confirmed that the processed material would be transported to and from this site by road.

ASSESSMENT (-) Road transport proposed

Transport – Distance to Markets

- 1.2.13 The operator has indicated that processed material would be transported to markets generally within 25 miles of the site.

ASSESSMENT (+) Distance of 20-25 miles to markets

ECONOMIC TOTAL 20/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)

- 1.2.14 There are several properties from which the site is visible. There are properties in Twyford to the north-west and several individual residential properties to the north of the site including Poplars Farm, which stands adjacent to the northern site boundary. Part of the site is also visible from properties in Ingleby to the south.

ASSESSMENT (-) The site has some visually sensitive receptors and/or some parts of the site will be visible from them

Noise

- 1.2.15 Some properties lie within the 500m noise contour. Properties in Twyford may be affected by working, although this could be minimised by omitting the smaller grazing fields adjacent to Twyford from the allocation and creating a noise attenuation bund on this western boundary. The main source of noise would be the processing plant. However, this would remain in its current location, which would mean only those properties that are already affected would continue to be affected, albeit for a longer period.

ASSESSMENT (-) The site has some noise sensitive receptors within 500m of the boundary of the site

Nuisance Dust

- 1.2.16 Some properties lie within 500m of the site. Sand and gravel is normally wet worked, with the result that dust is not a significant issue with this type of mineral extraction. The processing plant would remain in its current location and, therefore, it is likely that the working of this site would not exacerbate the current situation which conforms to environmental standards.

ASSESSMENT (-) The site has some high/medium dust sensitive receptors within 500m of the boundary of the site

Air Quality/Human Health

- 1.2.17 The site does not lie within 1000m of an AQMA.

ASSESSMENT (+) The site does not lie within 1000m of an AQMA

Transport – Local Amenity

- 1.2.18 HGVs travel on the A5132 on the northern edge of Barrow Upon Trent to reach the A50 from the site, and it appears that some also exit the A50/A38 and travel through Willington village to the existing site and vice versa.

ASSESSMENT (-) HGVs would pass some sensitive receptors to reach the main market areas

Benefits from the Proposed After-Use

- 1.2.19 In terms of environmental benefits, the proposed restoration scheme could provide net biodiversity gains as long as existing riverside habitats of palaeochannels and semi-improved grassland are retained. Restoration could potentially provide recreational opportunities in terms of the proposed water uses and improved recreational routes, particularly given that the public footpaths are severed to Twyford by the River Trent. The proposed reclamation to mainly water uses may provide some economic benefits in terms of the creation of recreational opportunities, which could create jobs and attract visitors to the area. The continued working of this site may also provide opportunities to improve the junction of the A5132 and A514.

ASSESSMENT (++) Many potential benefits from the proposed after-use

Cumulative Impact

- 1.2.20 There are existing mineral workings in the area and have been for a significant number of years.

ASSESSMENT (--) Impacts from past and existing mineral workings

Airport Safeguarding Birdstrike Issue – Potential Risk to Aircraft Safety

- 1.2.21 This site lies within the 13km birdstrike safeguarding zone for East Midlands Airport and, lying almost directly in line with the approach track flown by easterly arriving aircraft, is considered to be in a critical area for birdstrike.

ASSESSMENT (--) Site lies in an area where there is the highest potential risk of birdstrike

SOCIAL TOTAL 17/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment - Flooding

- 1.2.22 The site lies within the floodplain of the River Trent, within flood zone 3 where there is a high probability of flooding. A Flood Risk Assessment has been accepted for this area and works are on-going. The EA has stated that consideration should be given to extraction from the stand-off strip, allowing widening of the river and the creation of a braided channel.

ASSESSMENT (--) The site lies within flood zone 3 - high probability of flooding

Water Environment – Groundwater

- 1.2.23 This site lies outside a groundwater protection zone.

ASSESSMENT (+) The site lies outside a groundwater protection zone

Water Environment – Aquifer Protection

- 1.2.24 This site is on a secondary aquifer.

ASSESSMENT (-) Site lies on a secondary aquifer

Ecology - Existing Impacts from Mineral Extraction.

- 1.2.25 Eastern boundary currently very unnatural with open water and reed beds. Could be improved.

ASSESSMENT (+) Localised, but moderate to high, impacts on habitats

Ecology - UK, regional and local BAPs priority habitats and species

- 1.2.26 Majority of site is arable land with localised improved pasture adjacent to Twyford and possibly semi-improved in field by river with palaeochannels. Limited mature/veteran trees in centre of the site. No records = Priority habitats very limited.

ASSESSMENT (-) Some areas of positive ecological value, including UK or local priority habitats or species which should be considered for protection/conservation

Ecology - Ecological coherence/Natural Areas, Wildlife Corridors/Linkages

- 1.2.27 Very limited features characteristic of Natural Area and very limited coherence internally or with adjacent areas east or west.

ASSESSMENT (+) The site has few characteristics that accord with the established habitats over a wider area and its internal coherence is poor

Ecology - Habitat creation

- 1.2.28 Wetland nature reserve being developed to the immediate east. Priority habitats could be created providing valuable net biodiversity gains as long as existing riverside habitats of palaeochannels and semi-improved grassland retained.

ASSESSMENT (++) The site offers excellent opportunities to create or enhance UK priority habitats within the site and offers biodiversity benefit over a wider area

Landscape and Visual Amenity - Existing Impact

- 1.2.29 The proposed site is located east of Hilton and lies outside the Sherwood Sandstone area. There are localised high impacts associated with previous mineral extraction particularly to the east of this site.

ASSESSMENT (+) There are localised, moderate to high impacts associated with past mineral extraction

Landscape and Visual Amenity - Existing Infrastructure

- 1.2.30 There is existing infrastructure directly to the east of the site that could be utilised.

ASSESSMENT (++) There is existing infrastructure within the vicinity of the site that can be readily and easily used

Landscape and Visual Amenity - Strength of Landscape Character

- 1.2.31 This site crosses two LCTs but is poorly representative of each. The majority of the land is down to arable with some localised pasture associated with smaller fields adjacent to Twyford and immediately adjacent to the River Trent. Hedgerows are generally poor, in some places missing and generally species poor (visual observation). There is a general lack of tree cover associated with field boundaries and the river. Trees are mostly associated with the semi-improved areas near the river. The overall condition of the site is average to poor. There is an isolated burial mound and some localised ridge and furrow (poor condition) within the site.

ASSESSMENT (+) The proposed site has few characteristics that accord with the established landscape character and the condition is poor

Landscape and Visual Amenity - Visual Impact

- 1.2.32 The site has few visual receptors – occasional properties in Twyford to the north-west and Poplars Farm adjacent to the site boundary. Large parts of the site are difficult to see due to a lack of PROWs and lanes. Overall, this site has a low visual sensitivity.

ASSESSMENT (++) The site has few or no visual receptors and/or only small parts of the site will be visible

Historic Environment - Designated Sites & settings

- 1.2.33 An upstanding scheduled Round Barrow lies within the site area. Consideration will need to be given to the setting of this monument.

ASSESSMENT (--) Impact on a Grade I or II * designation, SM and/or its setting

Historic Environment – Archaeological Environment

- 1.2.34 Cropmarks are recorded north and south of the scheduled monument. Localised palaeochannels are present and evident along the southern fringe of the site, visible as existing stream line.

ASSESSMENT (+) Occasional or localised earthworks and/or known archaeology with limited potential for buried remains

Historic Environment - Historic Landscape

- 1.2.35 Earlier field pattern recognisable but considerable enlargement of fields in 20th century.

ASSESSMENT (+) Remnant field patterns with significant boundary loss

Best and Most Versatile Agricultural Land

- 1.2.36 A significant proportion of the site lies within an area where more than 60% of the land is likely to be best and most versatile agricultural land.

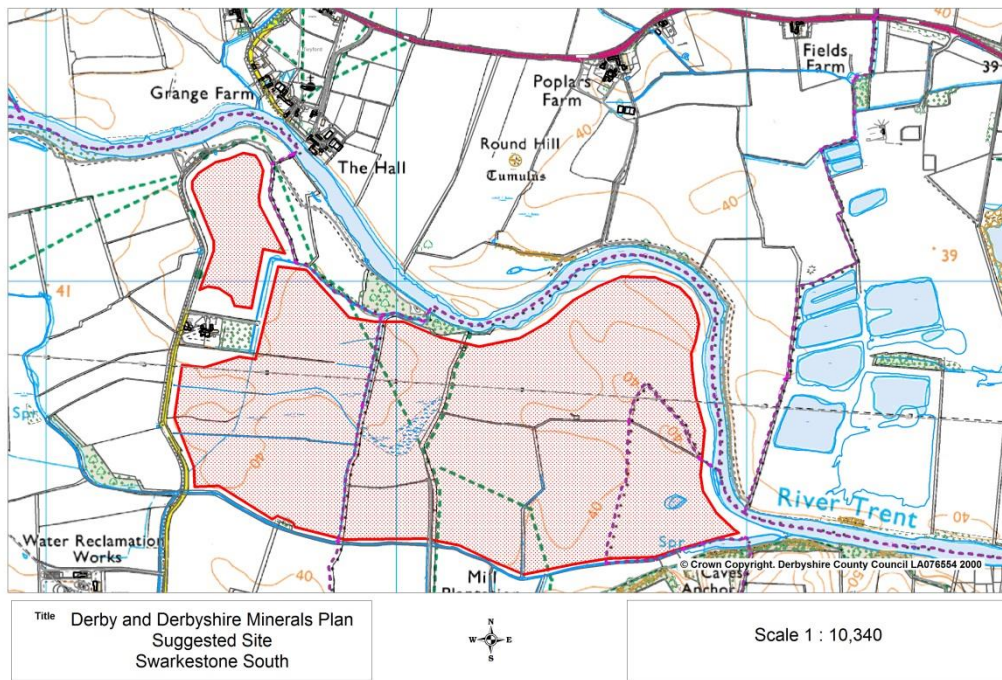
ASSESSMENT (-) Site lies within an area where there is a high likelihood of bmv land

ENVIRONMENTAL TOTAL – 41/56 (H)

1.3 Swarkestone South

Site Name: Swarkestone South
Reference Number: SG03
Proposed By: Tarmac

BACKGROUND



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Location and General Description of Site

- 1.3.1 This is an extension to the existing active Swarkestone Quarry. The 140 hectare site is situated to the south-west of the existing Swarkestone Quarry, to the south of the River Trent. The river forms the northern and eastern boundary of the site for a significant length. The western boundary is formed by a private access road. Repton village is situated to the south-west and Ingleby and Foremark villages to the south-east. Being within the floodplain of the River Trent, the terrain is generally flat and open. It is in agricultural use, predominantly as pasture land, with a number of hedgerows and hedgerow trees.

Resources (yield, annual output, depth of deposit)

- 1.3.2 Taking account of proposed stand offs, the proposed extraction area would be around **112 hectares**. It has been estimated that the site would yield saleable reserves of over **5 million tonnes** of sand and gravel from deposits that average **3.5 metres** in depth. Annual output is estimated at **300,000 tonnes**. The lifespan of the site is estimated at **20 years**.

End Use of, and Market for, Mineral

- 1.3.3 The company has stated that the material would be used in the production of ready mixed concrete, pipes, roof tiles, kerbs, slabs and other concrete products. Markets for the end products would generally be within a 25 mile radius of the site.

Timing and Phasing

- 1.3.4 It is not currently known when operations could commence but given the quantity of deposit and proposed annual extraction rates, it is estimated that operations would last 20 years.

Plant and Access Arrangements

- 1.3.5 The company proposes that the existing processing plant would be used and that the existing access road onto the A5132 would also be used. No details of the intended arrangements for transporting the mineral across the River Trent are known at this stage. The company estimates that there would be about 110 lorry movements per day from/to the site.

Site History

- 1.3.6 There is planning history for the adjacent site to the east, which was granted planning permission for the extraction of sand and gravel in 1994, and which is the current working area of the quarry. A scoping opinion was submitted for the eastern part of the site (60.3ha) in November 2015 by the mineral operator. This part contains around 2.5 million tonnes of sand and gravel.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.3.7 This proposal would utilise the existing quarry infrastructure.
ASSESSMENT (+) Use of existing quarry infrastructure

Sterilisation of Resources

- 1.3.8 The operation would continue the extraction of mineral using existing infrastructure
ASSESSMENT (+) Continued use of mineral resources using existing infrastructure

Employment

- 1.3.9 The operation would use existing employees from the existing quarry
ASSESSMENT (+) Retention of employees

Infrastructure - Access arrangements to the site

- 1.3.10 The site would use the existing access onto the A5132 and from there lorries would use the A50 or A38.
ASSESSMENT (+) The site would be accessed from an A road

Resources/Yield

- 1.3.11 It is estimated that this site would yield over 6 million tonnes of medium/high quality material from an extraction area of 112 hectares. This equates to around 54,000 tonnes per hectare.
ASSESSMENT (+) Yield of 50,000 – 75,000 tph

Transport – Mode of Transport to Market

- 1.3.12 Processed material would be transported by road. Use of the existing access and access road would be acceptable provided there would be no increase in number of lorry movements.

ASSESSMENT (-) Road transport proposed

Transport – Distance to Markets

- 1.3.13 The company intends that markets for the material would generally be within 25 miles of the site.

ASSESSMENT (+) Distance to markets of 20-25 miles

ECONOMIC TOTAL = 20/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and rights of way)

- 1.3.14 Properties at Twyford have partial views across the river of part of the site. A residential nursing home adjoins the site to the west and has open views of the western part of the site. There are also views from Anchor Church (historic feature) to the south-east of the site boundary and from a few properties in Ingleby and Foremark. There may also be long distance views of the site from properties in Willington and Barrow. The undulating topography to the south screens the majority of site from Repton and Milton. Overall, the site has a number of properties from which the site is visible. In addition, a footpath runs through the middle of the site and this forks to the north-west and to the east, the latter joining another footpath, which runs along the south-eastern boundary of the site. The majority of the site is visible from these public rights of way.

ASSESSMENT (-) The site has some visually sensitive receptors and some parts of the site will be visible from them

Noise

- 1.3.15 All properties in Twyford, the nearby nursing home, and two properties adjacent to the south-west boundary lie within 500m of the site. It is recognised that the principal source of noise would be from the processing plant, which would remain in its existing location. Further work will be required to assess the potential impact of working the site on properties close to the site.

ASSESSMENT (-) The site has some noise sensitive receptors within 500m of the boundary of the site

Nuisance Dust

- 1.3.16 All properties in Twyford, Foremark, the nursing home and two properties adjacent to the south-west boundary lie within 500m of the outer boundary of the site. There is the potential, therefore, for dust to be a problem. It is recognised that the material would be extracted in a wet condition, which would reduce significantly the potential for this to be a significant issue. However, the removal of the topsoil in the early stages of working has the potential to create some dust, but this will depend to a significant extent on the weather conditions leading up to, and during, this operation.

ASSESSMENT (-) The site has some high/medium dust sensitive receptors within 500m of the boundary of the site

Air Quality/Human Health

- 1.3.17 The site is not located within 1000m of an Air Quality Management Area.

ASSESSMENT (+) The site does not lie within 1000m of an AQMA

Transport – Local Amenity

- 1.3.18 Lorries would travel through the residential areas of either Barrow on Trent or Twyford and Willington to reach the A50/A38.

ASSESSMENT (-) HGVs would pass some sensitive receptors to reach the main market areas

Benefits from the Proposed After-Use

- 1.3.19 Reclamation of this site may provide some limited environmental benefits beyond what currently exists in terms of habitat creation in the eastern section of the site. The restoration of the site could provide limited opportunities for water-based recreation. There may also be potential recreation benefits in improving community access since the public footpath to Twyford is severed by the River Trent. The restoration of this site to water-based uses may provide some level of economic benefits in terms of jobs connected to the water based recreation uses and through people using the amenities.

ASSESSMENT (++) Many potential benefits from the proposed after use

Cumulative Impact

- 1.3.20 There are existing mineral workings in the area and have been for a significant number of years.

ASSESSMENT (--) Impacts from past and existing mineral workings

Airport Safeguarding Birdstrike Issue – Potential Risk to Aircraft Safety

- 1.3.21 This site lies within the 13km birdstrike safeguarding zone for East Midlands Airport and, lying almost directly in line with the approach track flown by easterly arriving aircraft, is considered to be in a critical area for birdstrike.

ASSESSMENT (--) The site lies in an area where there is the highest potential risk of birdstrike

SOCIAL TOTAL = 17/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment - Flooding

- 1.3.22 The site lies within the Trent floodplain within flood zone 3 where there is a high probability of flooding. A Flood Risk Assessment has been accepted for this area and works are ongoing in this respect. The EA has set out that consideration should be given to extraction from the stand-off strip, allowing widening of the river and the creation of a braided channel.

ASSESSMENT (--) Site lies within flood zone 3 high probability of flooding

Water Environment - Groundwater

- 1.3.23 Part of the south-western section of the site lies within a groundwater source protection zone. Given that the site is located adjacent to a water course and near other surrounding water features, it would require dewatering. A detailed EIA will be required detailing the effects of this de-watering on the surrounding water environment and what mitigation measures, if any, are required to deal with any adverse impacts. Correct pollution prevention procedures will need to be followed to prevent contamination of groundwater and the surrounding water environment.

ASSESSMENT (-) The site lies within a groundwater protection zone

Water Environment – Aquifer Protection

1.3.24 This site lies on a secondary aquifer.

ASSESSMENT (-) Site lies on a secondary aquifer

Ecology - Existing impacts from mineral extraction.

1.3.25 None internally. The river separates this site from existing workings to the NE.

ASSESSMENT (-) Only localised, limited impacts associated with mineral extraction within or adjacent to the site

Ecology - UK, regional and local BAPs priority habitats and species

1.3.26 Extensive arable, improved and semi-improved pasture. Hedgerows intact and close cut, but species poor, lacking notable hedgerow trees. Prominent trees and mixed species hedge (oak and some poor ash) associated with green lane in the centre of the site. Stream running west to east, lined with mature alder/willow. Some palaeochannels in improved pasture. Limited extent but valuable characteristic habitats of Natural Area.

ASSESSMENT (-) Some areas of positive ecological value, including UK or local priority habitats or species which should be considered for protection/conservation

Ecology - Ecological coherence/Natural Areas, Wildlife Corridors/Linkages

1.3.27 Overall coherence is limited due to the size of fields and limited features:

- western side has very limited habitats characteristic of Natural Area;
- eastern side has greater coherence and contains priority habitats - large pasture on riverside (possibly good for waders) has continuity with river, stream running across and forms back drop to valuable Anchor Church Wildlife Site.
- East side currently partially unmanaged but is capable of sustainable management.
- WS to west, stream and Anchor Church all potentially at risk from hydrological fluctuations.

ASSESSMENT (-) The proposed site generally accords with the established habitats over a wider area but the condition of habitats is poor

Ecology - Habitat creation

1.3.28 The site offers some opportunities in the east to create habitats which would enhance the wetland nature reserve across the river to the east, but elsewhere habitats would not be well linked to wider area. Habitat creation in the east would be at the cost of losses of large flood plain meadow, indicating a potential balance of impacts and benefits.

ASSESSMENT (-) Existing habitats are intact and habitat creation would only provide limited biodiversity enhancement within the site or the wider area

Landscape and Visual Amenity - Existing Impact

1.3.29 The proposed site is located in the eastern part of the river valley and lies outside the Sherwood Sandstones area. Locally, there are insignificant impacts associated with previous mineral extraction, although there are existing and previous workings across the River Trent to the east.

ASSESSMENT (-) There are only localised, low impacts associated with past mineral extraction

Landscape and Visual Amenity - Existing Infrastructure

1.3.30 There is no existing infrastructure associated with this site. Across the river to the north and east there is an existing plant site and associated infrastructure.

ASSESSMENT (-) There is existing infrastructure within the vicinity of the site but there would be significant adverse impacts associated with connecting to it

Landscape and Visual Amenity - Strength of Landscape Character

- 1.3.31 The site, directly south of the River Trent and north of Foremark, is poorly representative of the established character of the Riverside Meadows LCT with large parts of the site now down to arable or improved pasture. Hedgerows are mostly intact and close cut, generally species poor and lacking in notable hedgerow trees. The most prominent trees (oak and some poor quality ash) are associated with the green lane that dissects the site and connects to the river. There is some localised ridge and furrow and palaeochannels within areas of improved pasture and a small section of mixed species hedgerow associated with the green lane. Overall, the landscape character is weak although there are some attractive features, some of which are in good condition.

ASSESSMENT (+) The proposed site has few characteristics that accord with the established landscape character and the condition is poor

Landscape and Visual Amenity – Visual Impact

- 1.3.32 Properties in Twyford have partial views across the river of part of the site. A former water works, now redeveloped for residential purposes, adjoins the site to the west and would have open views of part of the site. There are views from a minor road to the south and a green lane with public access runs through the site with views east and west. There also views from Anchor Church (historic feature, RIGS and WS) to the south-east of the site boundary that might affect its setting. Overall, the site is of high to moderate visual sensitivity.

ASSESSMENT (-/--) The site has some/many visual receptors and or some/large parts of the site will be visible

Historic Environment - Designated Sites & settings

- 1.3.33 None within this area.

ASSESSMENT (+) No perceivable impact on a designation and/or its setting

Historic Environment – Archaeological Environment

- 1.3.34 Possibly some remnant ridge and furrow and parish boundary. Extensive and visible palaeochannels within the site.

ASSESSMENT (-) Frequent, visible and interpretable earthworks and/or some known archaeology

Historic Environment - Historic Landscape Character

- 1.3.35 The early field pattern has largely gone but some boundaries remain.

ASSESSMENT (+) Remnant field patterns with significant boundary loss

Best and Most Versatile Agricultural Land

- 1.3.36 The site has similar proportions of land where there is either likely to be less than 20% bmv or between 20% and 60%. A small part in the south-western section of this site lies within an area where more than 60% of the land is likely to be best and most versatile agricultural land.

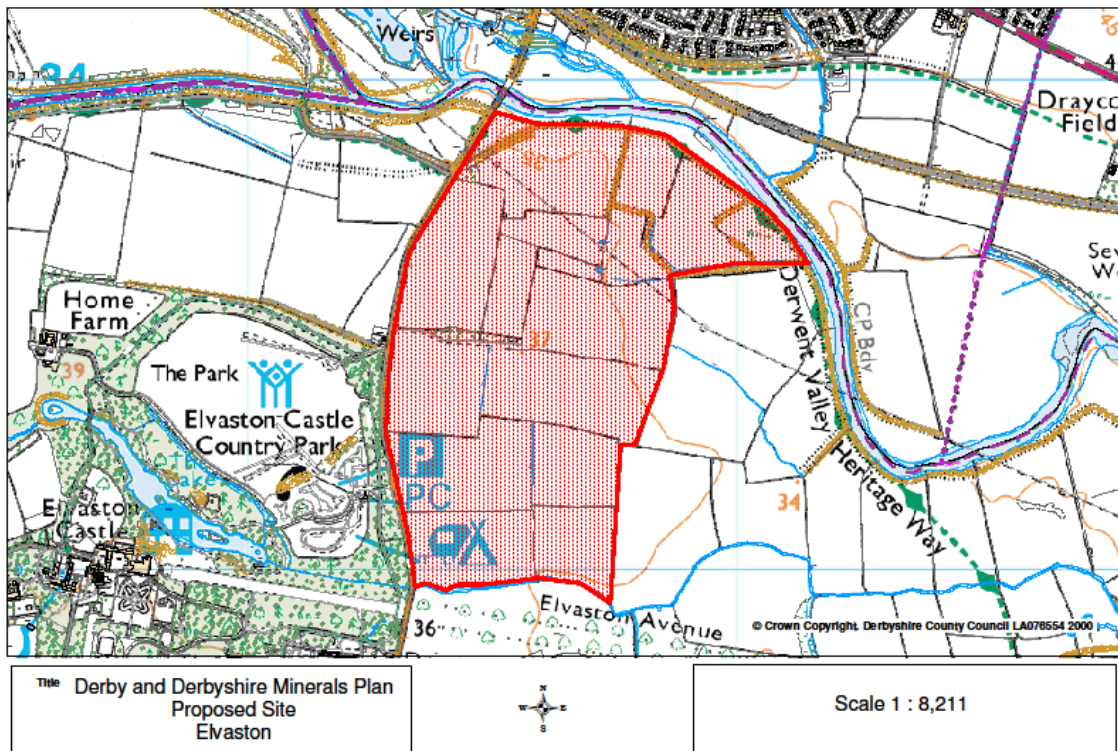
ASSESSMENT (+) The site lies in an area where there is a moderate likelihood of bmv land

ENVIRONMENTAL TOTAL 32/56 (M)

1.4 Elvaston

Site Name: Elvaston
Reference Number: SG04
Proposed By: Tarmac

BACKGROUND



Location and General Description of Site

- 1.4.1 The 50 ha site is proposed by Tarmac as an extension to the existing quarry. It is located to the north-west of the site, which received planning permission in 2013, and would continue the westerly movement of Elvaston Pit along the Derwent Valley. The site boundaries are well defined, its eastern boundary following the western boundary of the recently permitted area, its northern boundary follows the River Derwent, its western boundary follows the B5010 and its southern boundary follows an existing hedgerow.
- 1.4.2 The northern part of the site, south of the River Derwent and directly north-east of Elvaston Castle, comprises unimproved pasture and remnant hedgerows. The central area is predominantly arable fields with improved pasture to the south. There are occasional scattered trees of varying age and condition, a group of willows and evidence of lost hedgerows. Hedgerow condition is very variable.

Resources (yield, annual output, depth of deposit)

- 1.4.3 It is proposed to work some **1,500,000 tonnes** of sand and gravel from a net excavation area measuring **40ha** i.e. an estimated yield of tonnes per hectare **37,500 tph**. The average depth of the deposit is **2.5 metres**.

End Use of and Market for Mineral

- 1.4.4 The mineral would be used to supply local construction markets and concrete products manufacturing and ready mixed concrete manufacture, there is an existing concrete/mortar plant on site. The main market areas for the mineral would be Derby, south Derbyshire, north-east Leicestershire and south-west Nottingham.

Timing and Phasing

- 1.4.4 The company estimates that the annual output of the plant would be around 300,000 tpa. The estimated yield figure of 1,500,000 tonnes gives a lifespan for the site of approximately 5 years. Working is expected to follow on after the current site is worked out, estimated now to be around 2022-2023.

Additional note re: Resource

- 1.4.5 In order to fully utilise the deposit and ensure that sales of sand and gravel remain in step it is proposed to import 100,000 tonnes per annum of fine sand to the plant site for blending. The sand and gravel deposit is comprised of approximately 50% gravel and 50% coarse sand. Whilst it is possible to create a high grade concreting sand, to meet current market demand and concrete manufacturer's specifications, the processing of the sand deposit into a more finely grained end product would give rise to additional wastage over and above the anticipated silt fraction.
- 1.4.6 Fine sand would be imported from existing units in Nottinghamshire for blending with coarser in situ sand. 100,000 tonnes of fine sand would be blended with 150,000 tonnes of coarse sand per annum. Thus whilst extraction rates will be 300,000 tpa, sales will be 400,000 tpa over the lifespan of site.
- 1.4.7 Fine sand would be imported on a 'back haul' basis with the HGVs delivering the fine sand to the plant and then being used to convey processed mineral to the market. Given this reliance on back hauling it is estimated that at the most an additional 20 vehicle movements a day might be anticipated i.e. 10 in and 10 out.
- 1.4.8 Additionally the existing on-site concrete/mortar plant would also continue to import small volumes of material. As well as importing fine sand, the operator is also seeking to continue to import material for use with on-site mortar plant.

Plant and Access Arrangements

- 1.4.9 The site would be worked as the current site but with an extended conveyor system to serve this area. The site would be worked through the existing plant, which would need to be refurbished, and utilising existing access arrangements. Access to the plant site would be gained via a new conveyor tunnel to be constructed under Ambaston Lane and via an over ground conveyor through 'Elvaston Avenue' and across a culvert to be constructed over Ambaston Brook. All lorries would leave the plant site via the existing access road and would turn right, onto London Road, joining the main road network at Thulston Roundabout. No delivery vehicles would pass through Shardlow, or travel on Ambaston Lane or the B5010 to Borrowash.

Relevant History

- 1.4.10 Elvaston Pit is the extension of a pit established in the late 1960s when permission was granted for the extraction of minerals from land at Sawley Road, Draycott. Since that time

workings have extended progressively westwards along the Derwent valley. The most recent workings have taken place at Bellington Hill to the south-west of Ambaston village; permission to work this site and erect a new processing plant was granted in 1988. Extraction was completed in 1998, and most of the site is being restored to agriculture following infilling with quarry and imported wastes. The area to the north of these workings to the west of Ambaston was permitted in August 2013, and is yet to be started. It will yield around 1.8 million tonnes of sand and gravel.

Adopted Minerals Local Plan

- 1.4.11 The deposit draft edition of the MLP allocated a larger area for working at Elvaston which included this site, along with other areas. On the recommendation of the Inspector the allocation was re-evaluated and a smaller area, which did not include this site and other parts, was allocated for working in the adopted MLP.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.4.12 This proposal would utilise the existing quarry infrastructure.

ASSESSMENT (+) Use of existing quarry infrastructure

Sterilisation of Resources

- 1.4.13 The operation would continue the extraction of mineral using existing infrastructure

ASSESSMENT (+) Continued use of mineral resources using existing infrastructure

- 1.4.14 **Employment**

The operation would use existing employees from the existing quarry

ASSESSMENT (+) Retention of employees

Infrastructure: Access arrangements

- 1.4.15 The mineral would be delivered to markets by road. All lorries would leave the site via the existing access road and would turn right, onto London Road, joining the main road network at Thulston Roundabout. No delivery vehicles would pass through Shardlow or travel on Ambaston Lane or the B5010 to Borrowash.

ASSESSMENT (+) The site has direct access to an A road

Resources/Yield

- 1.4.16 This site is likely to yield 1.5 million tonnes of sand and gravel from an extraction area of 40 hectares. This equates to 37,500 tph.

ASSESSMENT (-) Yield 25,000 – 50,000 tph

Transport - Mode

- 1.4.17 The company has confirmed that the processed material would be transported to and from this site by road.

ASSESSMENT (-) Road transport proposed

Transport – Distance to Markets

- 1.4.18 The mineral would be used to supply local construction markets and concrete products manufacturing and ready mixed concrete manufacture. There is an existing

concrete/mortar plant on site. The main market areas for the mineral are Derby, south Derbyshire, north Leicestershire and south-west Nottinghamshire.

ASSESSMENT (++) Average distance to markets less than 20 miles

ECONOMIC TOTAL = 20/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)_

- 1.4.19 Some properties on the southern edge of Borrowwash, some 200m away, may have views across the northern part of the site from their upper floors. The northern section of the site would also be visible from the footpath between Borrowwash Bridge and Ambaston village which lies some 1000m from the south-eastern site boundary. Beechwood camp/caravan site which lies some 200m to the south of the site would be screened by trees/hedgerows on its northern boundary. There are open views from several residential properties and the main entrance to Elvaston Castle and Country Park which lie immediately across the road which forms the western boundary. Overall, the site has some visual receptors which have views of several parts of the site.

ASSESSMENT (-) The site has some visually sensitive receptors and/or some parts of the site will be visible

Noise

- 1.4.20 Noise would be generated by the operations to be carried out at the site, chiefly from soil and overburden movement, sand and gravel extraction and transportation from the site to the existing processing plant by conveyor.
- 1.4.21 The nearest noise sensitive properties are the residential dwellings and Elvaston Castle and Country Park immediately to the west and Beechwood Caravan Park which lies approximately 200 m to the south. Properties on the southern edge of Borrowwash lie some 200 m to the north across a busy railway line. Properties in Elvaston village lie some 300 – 500 m from the southern boundary.

ASSESSMENT (-) The site has some noise sensitive receptors within 500m from the boundary of the site

Nuisance Dust

- 1.4.22 Dust tends not to be a major problem associated with the extraction of river gravels due to the wet nature of the mineral, which acts as a natural dust suppressant. The nearest dust sensitive properties are those referred to in the noise section, which lie very close to the western and southern boundaries. Other sensitive properties include those on the southern edge of Borrowwash lie some 200m to the north and properties in Elvaston village which lie some 300 – 500m from the southern boundary.

ASSESSMENT (-) The site has some dust sensitive receptors within 500m from the boundary of the site

Air Quality/Human Health

- 1.4.23 The site does not lie within or within 1000m of any designated Air Quality Management Areas in which air quality objectives are not being met, which so far in Derby and Derbyshire have been associated with road traffic pollution.

ASSESSMENT (+) The site does not lie within 1000m of an AQMA.

Transport – Local Amenity

1.4.24 All mineral would be transported from the site to market by road. All lorries would leave the site via the existing access road and would turn right, onto London Road, joining the main road network at Thulston Roundabout. No delivery vehicles would pass through Shardlow, or travel on Ambaston Lane or the B5010 to Borrowash.

ASSESSMENT(++) Heavy goods vehicles would pass no sensitive receptors to reach the main market areas

Potential Benefits of the Proposed After-Use

1.4.25 The company suggests that a continuation of the reclamation scheme for the current quarry would be appropriate for this site. Restoration would be to a mixture of agricultural land, conservation and low key amenity uses. It is unlikely that the site would be suitable for the importation of fill material, due to the lack of access and, therefore, any restoration proposals would need to be implemented using fill material generated on site. In practice, this is likely to result in a substantial area of water.

1.4.26 The site offers some opportunities to create or enhance habitats and to enhance landscape character. It is a very sensitive site for East Midlands Airport, providing a major constraint on the design of restoration in terms of landscape and biodiversity features. There may be opportunities to provide links to Elvaston Castle and Country Park. In particular there may be an opportunity to improve the Derwent Valley Way to 'multi-user greenway' standards and to assist with the provision of a bridle bridge across the River Derwent at Ambaston Ford. This has been a long standing need for horse riding in the area and would provide a strategic link to the Midshires Way long distance bridle route.

ASSESSMENT (+) Two of the benefits (social, economic, environmental) arising from the proposed after-use.

Cumulative Impact

1.2.27 There are existing mineral workings in the area and have been for a significant number of years.

ASSESSMENT (--) Impacts from past and existing mineral workings

Airport safeguarding

1.4.28 Consultation with East Midlands Airport has established the degree to which the suggested site poses a potential risk to aircraft safety taking into account how the airport operates. This site is within the 13 km safeguarding zone around the airport lying some 7-8 kilometres to the north east of the airport and under a flight path. East Midlands Airport have indicated that this site lies within an area where there is a high potential risk of birdstrike.

ASSESSMENT (-) Site lies within an area where there is a high potential risk of birdstrike

SOCIAL TOTAL = 19/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment

1.4.29 The site is situated on a Minor Aquifer but is not within a Groundwater Source Protection Zone. Given that the site is located adjacent or near to a water course or other surrounding water features, i.e. the River Derwent, it would require dewatering. A detailed EIA would be required detailing the effects of this de-watering on the surrounding water environment

and what mitigation measures, if any, are required to deal with any adverse impacts. Correct pollution prevention procedures would need to be followed to prevent contamination of groundwater and the surrounding water environment.

1.4.30 The site lies within the floodplain of the Derwent, in a Flood Zone 3 where there is a high risk of flooding and therefore a flood risk assessment would be required by the EA. The assessment would need to cover as a minimum:

- That the physical integrity of any watercourses will be safeguarded by allowing adequate margins between the banks of the watercourse and excavation unless circumstances allow for the 'stand-off strip' to be worked
- That the effectiveness of local land drainage systems will be preserved
- That the functioning of the natural floodplain will be preserved

Water Environment - Flooding

1.4.31 The site lies within the Trent floodplain within Flood Zone 3 where there is a high risk of flooding.

ASSESSMENT (--) The site lies within flood zone 3 where there is a high probability of flooding.

Water Environment – Groundwater

1.4.32 The site lies outside a groundwater protection zone.

ASSESSMENT (+) The site lies outside a groundwater protection zone.

Water Environment – Aquifer

1.4.33 Site lies on a secondary Aquifer.

ASSESSMENT (-) Site lies on a secondary Aquifer.

Ecology

Presence or absence of existing impacts from mineral extraction

1.4.34 None.

ASSESSMENT (--) None, or insignificant, impacts from mineral extraction on habitats within or adjacent to the site

Presence or absence of priority habitats and species

1.4.35 Semi-improved pasture and remnant hedgerows adjacent to River Derwent. Arable fields in centre, improved pasture to south. Occasional scattered trees of varying age and condition, a group of willows and evidence of and lost hedgerows. Hedgerow condition very variable. No records.

ASSESSMENT (-) Some areas of positive ecological value including UK priority habitats and species which should be considered for protection/conservation

Ecological coherence: Natural Areas, Wildlife Corridors, Linkages

1.4.36 Few characteristics that accord with the priority habitats of the Natural Area. Coherence with river though cut off by flood bank, and with similar landscapes to east.

ASSESSMENT (-) The proposed site generally accords with the established habitats over a wider area (or in part) but the condition of habitats is poor OR few features within the site but encompassed by landscapes which have ecological coherence

Habitat Creation

- 1.4.37 Site offers some opportunities to create or enhance habitats within its boundaries but does not make linkages to wider area. A very sensitive site for East Midlands Airport, providing a major constraint in designing acceptable restoration of landscape and biodiversity which is also sustainable.

ASSESSMENT (+) The site offers some opportunities to create or enhance UK or local priority habitats within its boundaries, making overall habitat gain, but may not make appropriate linkages to wider area.

Landscape and Visual Amenity

Existing Impacts from mineral extraction

- 1.4.38 The proposed site is located in the strategic area to the east of Hilton. The Landscape Character Area data records the immediate area as having insignificant or no impacts associated with mineral extraction.

ASSESSMENT (--) There are insignificant impacts associated with past mineral working.

Existing Infrastructure

- 1.4.39 There is existing infrastructure in the locality, however it is some distance from the site and separated by Elvaston Castle Eastern Avenue and Ambaston Lane so there could be significant adverse impacts associated with connecting to it.

ASSESSMENT (-) There is existing infrastructure within the vicinity of the proposed site but there may be significant adverse impacts associated with connecting to it

Strength of Landscape Character

- 1.4.40 The northern part of the site directly south of the River Derwent and north-east of Elvaston Castle comprises of unimproved pasture with remnant hedgerows. The central area is predominantly arable fields with improved pasture to the south. There are occasional scattered trees of varying age and condition, a group of willows and evidence of lost hedgerows. Hedgerow condition is very variable. The proposed site has a few characteristics that accord with the established character of the *Riverside Meadows* and the condition is generally poor.

ASSESSMENT (+) The proposed site has few characteristics that accord with the established landscape character and the condition is poor and the enhancement of the landscape would be beneficial

Visual Impact

- 1.4.41 There would be potential views of the northern part of the site from a few residential properties in Borrowash across the River Derwent and the footpath that runs along the north bank of the river. The River Derwent Heritage Trail on the south bank of the river, which crosses the northern part of the site, would have views of this northern section. There may be views from the B5010, the entrance to Elvaston car park and Woodside properties. Overall the site has some visual receptors seeing several parts of the site.

ASSESSMENT (-) The site has some visual receptors and/or some parts of the site will be visible

Historic Environment

Designated sites & settings

- 1.4.42 Elvaston Castle Country Park is situated across the road from the site's western boundary and forms a well-used and valuable local recreational amenity. The Castle and Gardens are Grade II* Listed Buildings. The Eastern Avenue, which adjoins the southern boundary

is an integral component of the gardens. Working is likely to impact on the setting of the Castle, Park and Gardens.

ASSESSMENT (--) Impact on a Grade I or II* designation, SAM and/or its setting

Archaeological Environment

1.4.43 Some remnants of ridge and furrow adjacent to the river vestigial remains elsewhere of once very extensive open fields. Known palaeochannels adjacent to the river which may have considerable potential. No known sites or finds.

ASSESSMENT(+) Occasional or localised earthworks (may not be visually evident) and/or known archaeology with limited potential for buried remains

Historic Landscape Character

1.4.44 Pattern established by 1776 but altered thereafter and only remnant of original remains.

ASSESSMENT(+) Remnant field patterns with significant boundary loss.

Best and most versatile agricultural land

1.4.45 According to DEFRA`s Predictive Agricultural Land Classification Map the site lies in an area where 20% to 60% of the land is likely to be classed as bmv.

ASSESSMENT (+) The site lies in an area where there is a moderate likelihood of 'best and most versatile' agricultural land

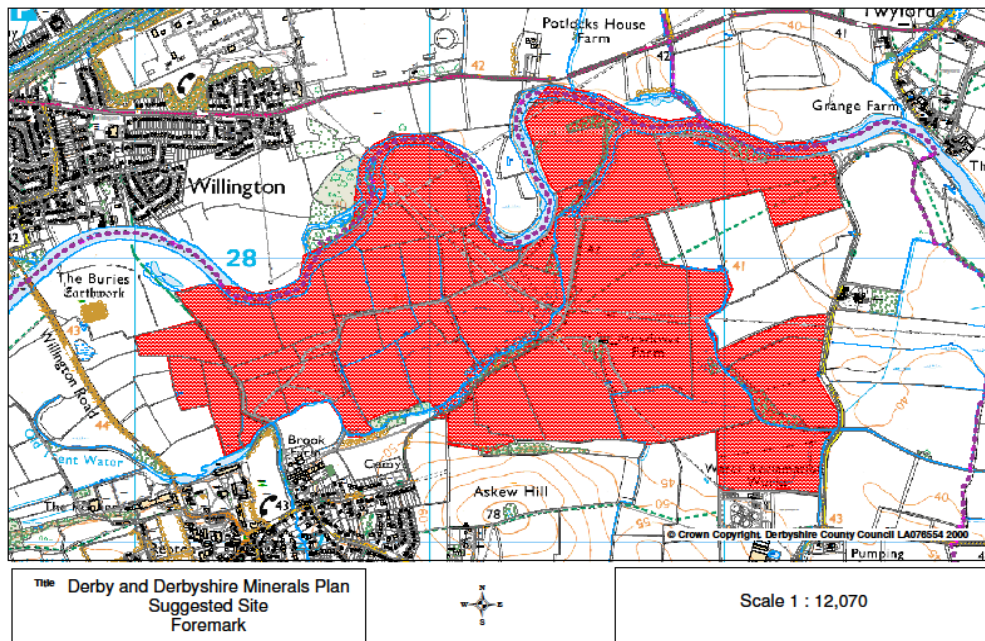
ENVIRONMENTAL TOTAL = 32/56 (M)

1.5 Repton/Foremark

Site Name: Repton/Foremark
Reference Number: SG05
Proposed By: Hansons

BACKGROUND

Site Location



Location and General Description of Site

- 1.5.1 The site was put forward by the company as an extension to the existing permitted area at Potlocks Farm. However, it lies to the south across the A5132 and the River Trent and is not physically connected to the Potlocks site. In addition, it has been agreed with Hanson's that the planning permission for the Potlocks site will be revoked as and when planning permission for the Weston extension of Shardlow Quarry is issued. It has, therefore, been evaluated as a new site. The site is located in the Trent Valley. It is in agricultural use, primarily grazing, and measures some 177 ha. Its boundaries are defined by the River Trent in the north, field boundaries in the south and west and a track to the east. An ancient route of the River Trent runs through the middle of the site.

Resources (yield, annual output, depth of deposit)

- 1.5.2 The site is located on the alluvial/terrace deposits of the Trent Valley. It is proposed to work some **11,200,000** tonnes of sand and gravel from a net excavation area measuring **142** ha i.e. an estimated yield of tonnes per hectare **78,900 tph**. The average depth of the deposit is **5.1** metres

End Use of and Market for Mineral

- 1.5.3 The end uses and markets are assumed to be the same as Shardlow which this site is intended to replace. The mineral would be used to supply coarse aggregate suitable for most construction purposes and fine aggregate including high quality concrete sand,

asphalt sand and mortar sand. The main market areas for the mineral are the Derby and Nottingham areas generally within 25 miles of the site.

Timing and Phasing

- 1.5.4 The company view this site as a long term replacement for the workings at Shardlow and therefore the level of reserves at Shardlow directly impacts on the timing of the commencement of this operation. The operator estimates that the annual output of the plant would be around 600,000 tpa. The estimated yield figure of 11,200,000 tonnes gives a lifespan for the site of approximately 18 years. Working would commence after reserves have been exhausted at Shardlow. It is estimated that existing permitted reserves at Shardlow will be exhausted by 2024.

Plant & Access Arrangements

- 1.5.5 It was originally considered that the site could be worked with the mineral being processed through the plant that would be erected at the Potlocks Farm site. Under this arrangement vehicles used to transport the processed mineral to end users would also continue to use the Potlocks access onto the A5132. For the reasons stated above that site will not now be worked and alternative new plant and access arrangements would need to be developed. This would require the construction of a new bridge across the River Trent. The A5132 provides good links to the A50/A38/M1.

Relevant History

- 1.5.6 Planning permission for the extraction of sand and gravel from Potlocks House Farm site, lying to the east of Willington Power Station was granted in 1972 to commence within 15 years. The date by which the development must be begun has been extended by successive planning permissions the last being in 1995; the development must be begun by 2010. Following the development of proposals for the Weston extension to the Shardlow the Potlocks site has been put on hold and the planning permission will be revoked when the Weston permission is issued.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.5.7 This proposal would require new quarry infrastructure.

ASSESSMENT (-) New quarry infrastructure

Sterilisation of Resources

- 1.5.8 A new operation but would replace one elsewhere once this has been exhausted

ASSESSMENT (-) Not an issue

Employment

- 1.5.9 A new operation but is unlikely to result in job losses elsewhere

ASSESSMENT (-) New operation but no related job losses

Infrastructure: Access arrangements

- 1.5.10 Access to the site would be from the A5132 which provides good links to the A50/A38/M1.

ASSESSMENT (+) The site has direct access to an A road

Resources/Yield

- 1.5.11 This site would yield 11.2 million tonnes of sand and gravel from an extraction area of 142 hectares. This equates to 78,900 tph.
ASSESSMENT (++) Yield >75,000 tph.

Transport - Mode

- 1.5.12 The company has confirmed that the processed material would be transported to and from this site by road.
ASSESSMENT (-) Road transport proposed

Transport – Distance to Markets

- 1.5.13 The main market areas for the mineral would be the Derby and Nottingham areas generally within 25 miles of the site.
ASSESSMENT (+) Average distance to markets 20 to 25 miles (32 to 40 km).

ECONOMIC TOTAL 18/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)

- 1.5.14 The site is visible from a number of surrounding locations. The north-western part of the site is visible from a number of properties on the southern edge of Willington, approximately 300 away with open views across the river. The western part of the site is visible from a number of properties on the northern edge of Repton village, including Repton School and grounds, which lie some 50 – 100 m from the southern site boundary on slightly higher land above the floodplain. The north-eastern part of the site is visible from some properties in Twyford village, approximately 300 m away, which have open views across the river. Individual properties close to the site include Brook Farm plus one or two nearby residences which lie some 150 – 200m from south-astern boundary and a nursing home which lies 10/20 m from eastern boundary. The nursing home whilst close to the eastern boundary of the site is well screened by trees within its curtilage. A few individual properties, including Brook farm, have open views across the north-eastern part of the site. There are two public footpaths, which pass through the site and workings would be prominent from these. The site is not visible from Milton village which lies some 500 m from the south-eastern boundary of the site beyond Askew Hill.

ASSESSMENT (--) The site has many visually sensitive receptors and/or large parts (or more than one part) of the site will be visible

Noise

- 1.5.15 Noise is likely to be generated by the operations to be carried out at the site, chiefly from soil and overburden movement, sand and gravel extraction and transportation of raw mineral within the site by conveyor or dump trucks to a processing plant. Additional noise would be created by vehicles transporting the processed mineral from the site to the end users. The nearest noise sensitive property is the nursing home, which lies some 10/20 metres from the eastern boundary of the site. Brook Farm and surrounding residences lie within 150 – 200 m of the south-eastern boundary. Many properties located within Twyford village, the southern part of Willington and the northern part of Repton village lie within 500 metres of the site boundary.

ASSESSMENT (--) The site has many noise sensitive receptors within 500m from the boundary of the site

Nuisance Dust

- 1.5.16 Dust tends not to be a major problem associated with the extraction of river gravels due to the wet nature of the mineral which acts as a natural dust suppressant. The nearest dust sensitive property is the nursing home which lies some 10/20 metres from eastern boundary. Brook Farm and surrounding residences lie within 150 – 200 m of the south-eastern boundary. Many properties located within Twyford village, the southern part of Willington and the northern part of Repton village lie within 500 metres of the site boundary.

ASSESSMENT (--) The site has many dust sensitive receptors within 500m from the boundary of the site

Air Quality/Human Health

- 1.5.17 The site does not contain lie within or within 1000m of any designated Air Quality Management Areas in which air quality objectives are not being met, which so far in Derby and Derbyshire have been associated with road traffic pollution.

ASSESSMENT (+) The site does not lie within 1000m of an AQMA.

Transport – Local Amenity

- 1.5.18 From the processing plant all mineral will be transported to market by road. The A5132 provides good links to the A50/A38/M1 however lorries travelling west from the site would pass through the village of Willington.

ASSESSMENT(--) Heavy goods vehicles would pass many sensitive receptors to reach the main market area

Potential Benefits of the Proposed After-Use

- 1.5.19 The mineral operator suggests that, given that the site lies outside the 13 km safeguarding area for East Midlands Airport and that ALC is predominantly poorer, the site is suitable for full reinstatement to agriculture or to water based nature conservation or a combination of both. The MPA considers that there is limited requirement for biodiversity enhancement within the site. Additionally, the proposed site accords with the established landscape character and is in good condition where the preference is for conservation. Water based nature conservation would conflict with the high potential risk of birdstrike. There may be an opportunity to create a strategic multi-user route, identified in the South Derbyshire Greenways Strategy, as a means of connecting the currently severed communities of Repton and Willington. The route identified follows the bridleway south of the river across the western part of this site. A new multi-user bridge would be required to cross the River Trent at this point.

ASSESSMENT(-) One of the benefits (social, economic, and environmental) arising from the proposed after-use

Cumulative Impact

- 1.5.20 There are existing mineral workings in the area and have been for a significant number of years.

ASSESSMENT (--) Impacts from past and existing mineral workings

Airport Safeguarding

- 1.5.21 We have established in consultation with East Midlands Airport the degree to which the suggested sites pose a potential risk to aircraft safety, taking into account how the airport operates. The site lies on the very edge of the 13 km birdstrike safeguarding zone around East Midlands Airport, however, it lies almost directly in line with the approach track flown by easterly arriving aircraft. As arriving aircraft fly slowly and descend gradually, they

would be at relatively low altitudes at this distance from the airport. In view of this, East Midlands Airport considers this site to be within an area where there is a high potential risk of birdstrike.

Assessment (--) Site lies within an area where there is a high potential risk of birdstrike

SOCIAL TOTAL 11/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment

1.5.22 The site is situated on a Minor Aquifer but is not within a Groundwater Source Protection Zone. Given that the site is located adjacent or near to water course or other surrounding water features, i.e. the River Trent, it would require dewatering. A detailed EIA would be required detailing the effects of this de-watering on the surrounding water environment and what mitigation measures, if any, are required to deal with any adverse impacts. Correct pollution prevention procedures would need to be followed to prevent contamination of groundwater and the surrounding water environment.

1.5.23 The site lies within the floodplain of the Trent, in a Flood Zone 3 where there is a high risk of flooding and therefore a flood risk assessment would be required by the EA. The assessment would need to cover as a minimum:

- That the physical integrity of any watercourses will be safeguarded by allowing adequate margins between the banks of the watercourse and excavation unless circumstances allow for the 'stand-off strip' to be worked
- That the effectiveness of local land drainage systems will be preserved
- That the functioning of the natural floodplain will be preserved

Water Environment - Flooding

1.5.24 The site lies within the Trent floodplain within flood zone 3 where there is a high risk of flooding. A Flood Risk Assessment is required for this site.

ASSESSMENT (--) The site lies within flood zone 3 where there is a high probability of flooding.

Water Environment – Groundwater

1.5.25 The site lies outside a groundwater protection zone.

ASSESSMENT (+) The site lies outside a groundwater protection zone.

Water Environment – Aquifer

1.5.26 Site lies on a secondary Aquifer

ASSESSMENT (-) Site lies on a secondary Aquifer.

Ecology

Presence or absence of existing impacts from mineral extraction

1.5.27 None

ASSESSMENT (--) None, or insignificant, impacts from mineral extraction on habitats within or adjacent to the site

Presence or absence of priority habitats and species

- 1.5.28 Old Trent Water (candidate WS) is major priority feature cutting across site, dividing arable from improved pasture. Field boundaries generally intact; contain scattered oak and ash. Valuable wet woodland WS in east.

ASSESSMENT (--) Extensive positive ecological value including UK priority habitats and species which should be considered for protection/conservation.

Ecological coherence: Natural Areas, Wildlife Corridors/Linkages

- 1.5.29 Western half has strong coherence internally and with fields to west and links to river. In east coherence with river is limited.

ASSESSMENT (--) The proposed site accords with the established habitats over a wider area and habitat pattern is strong

Habitat Creation

- 1.5.30 Existing habitats are intact and make a strong contribution to biodiversity priorities in the west of the site. There is limited requirement for biodiversity enhancement within the site.

ASSESSMENT (--) Existing habitats are intact and make a strong contribution to priority biodiversity targets for conservation and there is strong ecological coherence within the site; habitat creation would not enhance the site or the wider area

Landscape and Visual Impact Assessment

Existing Impacts from mineral extraction

- 1.5.31 The proposed site is located in the strategic eastern area of the river valleys. Locally, there are insignificant impacts associated with previous mineral extraction.

ASSESSMENT (--) There are insignificant impacts associated with past mineral working

Existing Infrastructure

- 1.5.32 There is no existing infrastructure associated with this site or within the immediate locality. The infrastructure for this site would need to be developed.

ASSESSMENT (--) There is no existing infrastructure and this will need to be developed for the proposed site to be operated

Strength of Landscape Character

- 1.5.33 The area of the site north and west of the Old Trent Water and immediately adjacent to the River Trent accords strongly with the established landscape character of the Riverside Meadows LCT. Although there are large arable fields associated with land around the former Meadows Farm the overall character of this site is strong and visually coherent. Field boundaries are generally intact; contain scattered oak and ash and broadly accord with the boundaries shown on 1st edition OS maps. The overall condition of the site is good. There are extensive archaeological features associated with palaeochannels and localised ridge and furrow.

ASSESSMENT (--) The proposed site accords with the established landscape character and is in good condition (Conserve)

Visual Impact

- 1.5.34 The site is visible from a number of locations around the site. The western and northern parts are visible from residential properties at Willington and Repton School and grounds. Potentially, the north-eastern area is visible from across the River Trent at Twyford. There are two footpaths that pass through the site, including a route adjacent to the Old Trent Water. Overall, this site is considered to be visually sensitive.

ASSESSMENT (--) The site has many visual receptors and/or large parts (or more than one part) of the site will be visible

Historic Environment

Designated sites & settings

1.5.35 Need to consider the setting of the Repton conservation area and listed buildings.

ASSESSMENT (-) Impact on a Grade II designation, conservation area and/or its setting

Archaeological Environment

1.5.36 Isolated areas of ridge and furrow and the SMR site 'the Buries'. Extensive palaeochannels to the south of the river and includes Old Trent Water, a former channel of the River Trent.

ASSESSMENT(--) Extensive, visible and interpretable earthworks and/or known archaeology with high potential for buried remains.

Historic Landscape Character

1.5.37 Many of the field boundaries are visible on 1769 and 1829 maps.

ASSESSMENT(--) Evidence of multi period landscape and/or intact field pattern (as indicated by 1st edition OS or earlier)

Best and most versatile agricultural land

1.5.38 According to DEFRA's Predictive Agricultural Land Classification Map the majority of the site lies in an area where less than 20% is likely to be bmv.

ASSESSMENT(++) Low areas where less than 20% of the land is likely to be bmv)

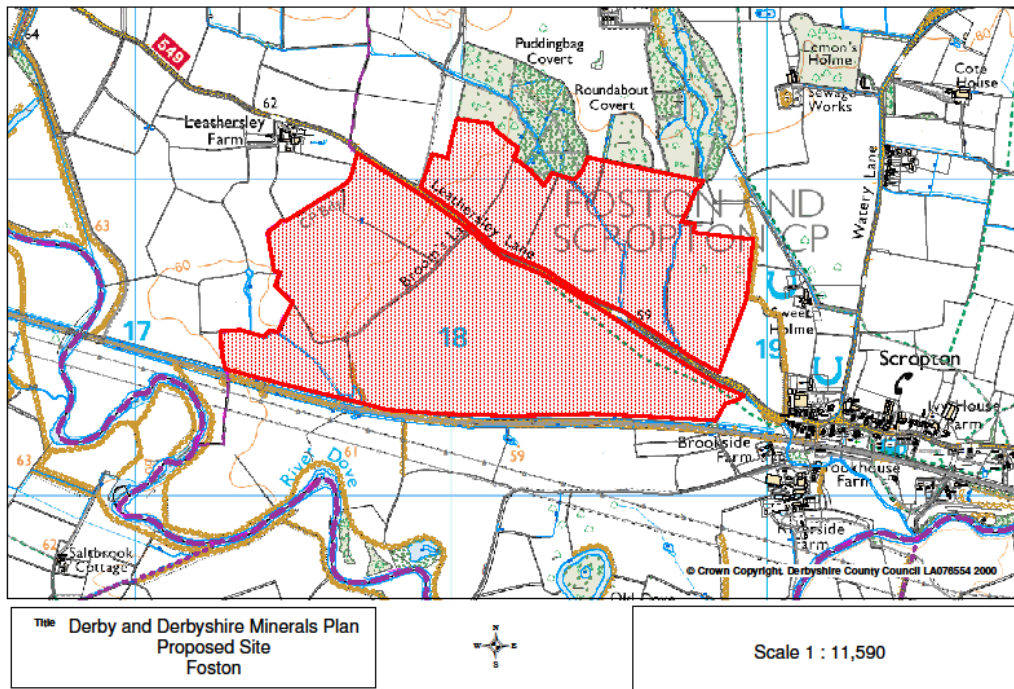
ENVIRONMENTAL TOTAL = 22/56 (L)

1.6 Foston

Site Name: Foston
Reference Number: SG06
Proposed By: Hanson's

BACKGROUND

Site Location



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Location and General Description of Site

- 1.6.1 This is a newly proposed site, representing a new operation for the extraction of sand & gravel. This generally level site is situated to the south of the A50, to the west of Scropton village and to the south of Foston. Leathersley Lane passes through the middle of the site and the railway line to the south of the site forming its southern boundary. It is about 110 hectares in size and is currently in agricultural use, predominantly as arable land. There are boundary hedgerows with mature, mainly, oak trees. Two watercourses run through the site.

Resources (yield, annual output, depth of deposit)

- 1.6.2 The site is anticipated to yield about **8 million** tonnes of sand and gravel from deposits that are **4m** in depth with 1.1m of overburden. The extraction area would be about **110 hectares**, yielding around **72,700** tonnes per hectare.

End Use of, and Market for, Mineral

- 1.6.3 The product would be used in the manufacture of concreting and building sand, and these would be sold to fixed outlets and builders' merchants, generally within a 25 mile radius of the site.

Timing and Phasing

1.6.4 Production would take place over an estimated 22.5 year period.

Plant and Access Arrangements

1.6.5 A new access would be created onto either the A50 or Leathersley Lane. The proposed operator has rights over land to the north giving the potential for access to be gained directly to the A50. The processing plant would have an estimated normal capacity of 280,000 tonnes per annum. Its location is yet to be determined.

Site History

1.6.6 There is no relevant mineral planning history for this site. It is the first time that this site has been considered, lying in the western part of the valleys, where large scale mineral extraction has so far not taken place.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

1.6.7 This proposal would require new quarry infrastructure.

ASSESSMENT (-) New quarry infrastructure

Sterilisation of Resources

1.6.8 A new operation but would replace one elsewhere once this has been exhausted

ASSESSMENT (-) Not an issue

Employment

1.6.9 A new operation but is unlikely to result in job losses elsewhere

ASSESSMENT (-) New operation but no related job losses

Infrastructure - Access Arrangements

1.6.10 The site only has access to a minor road, although the proposed operator has rights over land to the north giving the potential for access to be gained directly to the A50.

ASSESSMENT (--) The site has direct access to a minor road

Resources: Yield

1.6.11 The site would yield about 72,700 tonnes of sand and gravel per hectare.

ASSESSMENT (+) Yield of 50,000 – 75,000 tph

Transport – Mode of Transport to Market

1.6.12 The proposed operator expects that all material would be transported by road using HGVs.

ASSESSMENT (-) Road transport proposed

Transport – Distance to Markets

1.6.13 Processed material would generally be sold to markets within a 25 mile radius of the site.

ASSESSMENT (+) Distance to markets of 20-25 miles

ECONOMIC TOTAL 15/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)

- 1.6.14 Views of the site are predominantly from Leathersley Lane and Brooms Lane and the railway, which runs along the southern boundary of the site. A public footpath also runs parallel to Leathersley Lane through part of the site. The open nature of the site means it is very visible from these public routes. Leathersley Farm to the west of the site is the only property that is in close proximity to the site. However, views from the actual farmhouse to the site are shielded by the farm storage buildings. The main views from the farmhouse are to the north and the east. There are a few residential properties which have views of this site. Sweet Holme Farm and two properties on the western edge of Scropton lie about 200m from the eastern edge of the site and are the only properties that have direct views onto a proportion of the site (the eastern third of the site). Views from Foston and the A50 to the north are obscured by dense woodland. Tutbury Castle and grounds, which is a scheduled monument and lies on higher ground to the south could, potentially, have distant views of the sites.

ASSESSMENT (-) The site has some visually sensitive receptors and some parts of the site will be visible from them

Noise

- 1.6.15 To a large extent, this depends on the location of the processing plant which if located on the north of the site close to the woodland, would have less impact than elsewhere on the site. However, a number of residential properties on the western side of Scropton lie within 500m of the site, although the woodland would reduce the effects of noise on properties to the north of the site.

ASSESSMENT (-) The site has some noise sensitive receptors within 500m from the boundary of the site

Nuisance Dust

- 1.6.16 As above, a number of properties in the village of Scropton are within 500m of the site. Scropton lies to the east of the site, in the direction of the prevailing wind. The topography is level and there is no significant tree cover on this eastern boundary.

ASSESSMENT (-) The site has some high/medium dust sensitive receptors within 500m from the boundary of the site

Air Quality/Human Health

- 1.6.17 There are no Air Quality Monitoring Areas near the site.

ASSESSMENT (+) Site does not lie within 1000m of an AQMA

Transport – Local Amenity

- 1.6.19 Any adverse effects on residential amenity would be limited.

ASSESSMENT (+) HGVs would pass few sensitive receptors to reach the main market areas

Benefits from the Proposed After-Use

- 1.6.20 The proposed operator has indicated that this proposal would involve restoration to the current agricultural use, although this depends to a large extent on the availability of infill material. The existing environmental value of the site is sufficiently high meaning that it is unlikely that extraction would lead to an enhancement of this value. Reclamation to the current agricultural use would appear to provide few, if any, direct benefits to the community, although in the long term, it could provide the opportunity to develop a section

of the proposed multi-user trail from Hilton to Sudbury Hall. The proposed agricultural after use would provide few economic benefits to the area over and above those that exist already.

ASSESSMENT (-) Few benefits from the proposed after-use

Cumulative Impact

- 1.6.21 Apart from the small borrow pits developed during the construction of the A50 there are no significant impacts of past or present mineral extraction in the area but there are other commercial operations in the area which together with the proposed mineral working would impact on the village.

ASSESSMENT (-) There are not any current mineral workings in the area but there is other commercial activity in the area

Airport Safeguarding Birdstrike Issue – Potential Risk to Aircraft Safety

- 1.6.22 This site lies outside the birdstrike safeguarding zones for East Midlands Airport and Derby Aerodrome in an area of low risk for birdstrike.

ASSESSMENT (++) The site lies within an area where there is a low potential risk of birdstrike

SOCIAL TOTAL 20/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment - Flooding

- 1.6.23 The site lies within a flood zone 3, which has the highest probability of flooding.

ASSESSMENT (--) Site lies within flood zone 3 - high probability of flooding

Water Environment – Groundwater

- 1.6.24 None of this site lies within a Groundwater Protection Zone.

ASSESSMENT (+) Site lies outside a Groundwater Protection Zone

Water Environment – Aquifer Protection

- 1.6.25 This site lies on a secondary aquifer.

ASSESSMENT (-) Site lies on a secondary aquifer

Ecology - Existing impacts from mineral extraction.

- 1.6.26 None.

ASSESSMENT (--) Only localised, limited impacts associated with mineral extraction within or adjacent to the site

Ecology - UK, regional and local BAPs priority habitats and species

- 1.6.27 Notable hedgerow oaks, strong tree line on Foston Brook Course. Crayfish 1993.

ASSESSMENT (-) Some areas of positive ecological value, including UK or local priority habitats or species which should be considered for protection/conservation

Ecology - Ecological coherence/Natural Areas, Wildlife Corridors/Linkages

- 1.6.28 Limited priority features and no connection with Dove valley due to railway to south.

ASSESSMENT (-) Few features within the site but encompassed by landscapes which have ecological coherence

Ecology - Habitat Creation

1.6.29 There are sufficient existing habitats – trees and hedgerows - to make the need for habitat enhancement or creation very limited.

ASSESSMENT (-) Existing habitats are intact and habitat creation would only provide limited biodiversity enhancement within the site or the wider area

Landscape and Visual Amenity - Existing Impact

1.6.30 There are no impacts within the vicinity of this proposed site from former extensive mineral extraction.

ASSESSMENT (--) There are insignificant impacts associated with past mineral working

Landscape and Visual Amenity - Existing Infrastructure

1.6.31 There is no existing infrastructure and this would need to be developed for the proposed site to become operational.

ASSESSMENT (--) There is no existing infrastructure and this will need to be developed for the site to be operated

Landscape and Visual Amenity - Strength of Landscape Character

1.6.32 The site is bounded by Foston Hall plantations – Puddingbag Covert, Roundabout Covert and Fishpond Plantation to the north. The railway forms the southern boundary so the site is separated from the River Dove. Scropton village is directly to the east of the site. The site is dominated by arable fields bounded by hedgerows in variable condition. There are hedgerow oaks and a strong tree line along Foston Brook Course. The majority of the site has very few characteristics of the *Riverside Meadows LCT*, with the exception of a small area to the south where there are some watercourse trees of predominantly willows, ridge and furrow in the pasture and Broom's Lane with two very mature Black poplars. Overall, the landscape condition is poor.

ASSESSMENT (+) The proposed site has few characteristics that accord with the established landscape character and the condition is poor

Landscape and Visual Amenity - Visual Impact

1.6.33 Views are predominantly from Leathersley Lane and Broom's Lane. There could potentially be partial views from Maidensley Lane Farm and the west side of Scropton Village. In addition, Tutbury Castle and grounds which is a scheduled monument, could potentially have views of the sites. The site has some potential visual receptors and several parts of the sites could be visible.

ASSESSMENT (-) The site has some visual receptors and some parts of the site will be visible

Historic Environment - Designated Sites & Settings

1.6.34 None known on this site.

ASSESSMENT (+) No perceivable impact on a designation

Historic Environment – Archaeological Environment

1.6.35 Small area of ridge and furrow in the south-west corner of site. A substantial palaeochannel runs along southern edge of the site. Some recorded archaeology/artefacts.

ASSESSMENT (+) Occasional or localised earthworks and known archaeology with limited potential for buried remains

Historic Environment - Historic Landscape

1.6.36 Much altered and many boundaries removed.

ASSESSMENT (+) Remnant field patterns with significant boundary loss

Best and Most Versatile Agricultural Land

1.6.37 This site lies within an area where less than 20% of the land is likely to be best and most versatile agricultural land.

ASSESSMENT (++) The site lies within an area where there is a low likelihood of bmv land

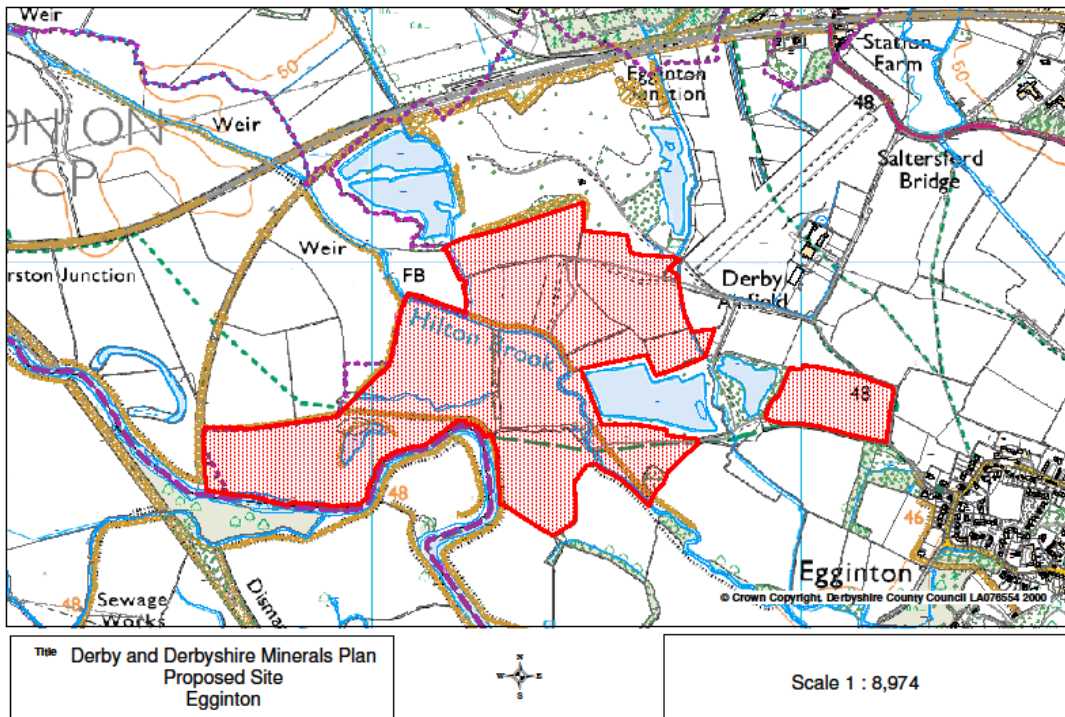
ENVIRONMENTAL TOTAL = 33/56 (M)

1.7 Egginton

Site Name: Egginton
Reference Number: SG07
Proposed By: Hansons

BACKGROUND

Site Location



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Location and General Description of Site

- 1.7.1 This is a proposed extension by Hansons to a dormant site. Technically, therefore, the suggested site has been considered as a new site. It is an allocation in the adopted Minerals Local Plan. This 40 hectare site is located immediately to the west of Egginton and to the north-east of the River Dove. Derby Airport is located immediately to the north/north-east of the site. Reclaimed former mineral workings are to the north/north-west of the site with the railway line beyond. The site is open in nature and of level terrain, being partially within the floodplain of the River Dove and Hilton Brook. The majority of the site is currently in agricultural use as pasture land. Although close to the western edge of Egginton village, the site is not easily visible from this settlement because of a line of mature hedgerow trees and an area of dense woodland screening to the south-east of the site.

Resources (yield, annual output, depth of deposit)

- 1.7.2 It is estimated that the site could yield **1.8 million tonnes** of sand & gravel from an extraction area of **31 hectares**, with an estimated annual output of **280,000 tonnes**, and an estimated lifespan of **7-8 years** of working.

End Use of, and Market for, Mineral

- 1.7.3 The company intends that the product would be used as aggregate, concreting and building sand, and sold to outlets and builders merchants, generally within a 25 mile radius of the site.

Timing and Phasing

- 1.7.4 The company has intimated that this site would be worked as a replacement to the Mercaston operation and is unlikely, therefore, to be brought forward during the Plan period.

Plant and Access Arrangements

- 1.7.5 A new processing plant would need to be constructed within the site. Permission for the intended plant on the adjacent site expired in 2007. Access for the previous working was gained onto the A5132 at Saltersford Bridge, from which lorries would then travel to the A38 and A50. This permission has now expired.

Site History

- 1.7.6 Planning permission was originally granted in 1960 for the extraction of sand & gravel on the area immediately to the north and east of this proposed extension. The area was extended under a planning permission in 1968. Gravel has been won from about half of the permitted site, but there has been no extraction for some considerable time and the site is now dormant in legal terms. The extracted mineral was processed off-site. The infilling of the voids with pfa has been progressing and the area has been restored gradually to agricultural use, together with some wooded areas for wildlife.
- 1.7.7 In 1992, permission was granted for an on-site processing plant and a concrete batching plant on an area of backfilled land immediately to the south of the railway line. This permission has expired without having been implemented.

SITE ASSESSMENT

ECONOMIC CONSIDERATIONS

Existing Infrastructure

- 1.7.8 This proposal would require new quarry infrastructure.

ASSESSMENT (-) New quarry infrastructure

Sterilisation of Resources

- 1.7.9 A new operation but would replace one elsewhere once this has been exhausted

ASSESSMENT (-) Not an issue

- 1.7.10 **Employment**

A new operation but is unlikely to result in job losses elsewhere

ASSESSMENT (-) New operation but no related job losses

Infrastructure - Access arrangements to the plant site

- 1.7.11 Access to the proposed plant site would be direct onto the A5132 at Saltersford Bridge.

ASSESSMENT (+) The site has direct access to an A road

Resources: Yield

- 1.7.12 The company estimates that 1.8 million tonnes of material would be extracted from an area of around 31 hectares. This equates to around 56,000 tonnes per hectare.
ASSESSMENT (+) Yield of 50,000 – 75,000 tph

Transport – Mode of Transport to Market

- 1.7.13 The operator has confirmed that processed material would be transported from the site by road.
ASSESSMENT (-) Road Transport proposed

Transport – Distance to Markets

- 1.7.14 Generally, the processed material would be sold to markets within a 25 mile radius of the site.
ASSESSMENT (+) Distance to markets of 20-35 miles

ECONOMIC TOTAL 17/24

SOCIAL CONSIDERATIONS

Visual Intrusion (Properties and Rights of Way)

- 1.7.15 The site is in a very secluded location and has very few visual receptors. There are no residential properties from which the site can be seen. There are farm storage buildings alongside the other buildings associated with the airfield. These lie about 100m to the east of the site. It is well screened to the north by dense woodland and also from Egginton village to the east by areas of woodland. However, there is a public footpath/bridleway, which runs through the southern section of the site, from which several parts of the site are visible.
ASSESSMENT (+) The site has few visually sensitive receptors but large parts of the site will be visible from them

Noise

- 1.7.16 Around half of Egginton village lies within 500m of SA06 but none within 500m of SA05. The extensive wooded areas adjacent to the site may mitigate to some extent any adverse noise impact that the workings may have on the area.
ASSESSMENT (-) The site has some noise sensitive receptors within 500m from the boundary of the site

Nuisance Dust

- 1.7.17 There are some sensitive receptors within 500m of the site.
ASSESSMENT (-) The site has some high/medium dust sensitive receptors within 500m from the boundary of the site.

Air Quality/Human Health

- 1.7.18 The site does not lie within 1000m of an Air Quality Management Area.
ASSESSMENT (+) Site does not lie within 1000m of an AQMA

Transport – Local Amenity

- 1.7.19 HGVs would not have to travel through any residential areas to reach the main market areas. Only a small number of individual properties would be affected along the route.

ASSESSMENT (+) HGVs would pass few sensitive receptors to reach the main market areas

Benefits from the Proposed After-Use

- 1.7.20 Given the existing rich environmental value of this site, it is not considered that its working and reclamation would provide environmental benefit greater than already exists. The operator proposes to restore the site to agricultural use. It does not appear that this would provide any notable benefits to the community. The proposed agricultural after-use would provide few economic benefits. The operator may, however, wish to make a contribution towards the creation of multi-user trails, which are proposed in the vicinity of this site.

ASSESSMENT (-) Few benefits from the proposed after-use

Cumulative Impact

- 1.7.21 There are no significant impacts of present mineral extraction in the area but there has been extraction in the past

ASSESSMENT (-) There are not any current mineral workings in the area but there have been workings in the past

Airport Safeguarding Birdstrike Issue – Potential Risk to Aircraft Safety

- 1.7.22 This site lies outside the 13km zone for East Midlands Airport but inside the 3km zone for Derby Airport adjacent to the site. Only light aircraft use this airport but due to the proximity to the site this will still be an important consideration.

ASSESSMENT (-) Site lies in an area where there is a high potential risk of birdstrike

SOCIAL TOTAL 19/29

ENVIRONMENTAL CONSIDERATIONS

Water Environment – Flooding

- 1.7.23 The site lies within the highest flood zone 3.

ASSESSMENT (--) Site lies within Flood Zone 3 highest risk of flooding

Water Environment – Groundwater

- 1.7.24 The site does not lie within a Groundwater Source Protection Zone.

ASSESSMENT (+)

Water Environment – Aquifer Protection

- 1.7.25 This site lies on a secondary aquifer.

ASSESSMENT (-)

Ecology - Existing impacts from mineral extraction

- 1.7.26 Previous sites reclaimed by nature – essentially no impact.

ASSESSMENT (--) Only localised, limited impacts associated with mineral extraction within or adjacent to the site

Ecology - UK, regional and local BAPs priority habitats and species

- 1.7.27 Complex of habitats very characteristic of the Dove valley i.e. oxbows with open water, wet woodland, potential veteran crack willows, alder, ditches, osier beds, Hilton Brook with in-stream and marginal habitats. All priority habitats which need assessment against WS criteria. Good for waders.

ASSESSMENT (--) Extensive areas of positive ecological value, including UK priority habitats or species which should be considered for protection/conservation

Ecology - Ecological coherence/Natural Areas, Wildlife Corridors/Linkages

- 1.7.28 High internal coherence and with surrounding areas, strong affinity with river, many characteristic habitats of the natural area.

ASSESSMENT (--) The proposed site accords with the established habitats over a wider area and habitat pattern is strong

Ecology - Habitat Creation

- 1.7.29 Existing habitats are intact and make a strong contribution to priority biodiversity targets for conservation. There is no requirement for biodiversity enhancement within the site.

ASSESSMENT (--) Existing habitats are intact and make a strong contribution to priority biodiversity targets for conservation and there is strong ecological coherence within the site; habitat creation would not enhance the site or the wider area

Landscape and Visual Amenity - Existing Impact

- 1.7.30 The site is located to the east of Hilton and lies outside the Sherwood Sandstone area. There are only localised moderate impacts from mineral extraction in the immediate locality and these are not visually apparent when on site.

ASSESSMENT (-) There are only localised, low impacts associated with past mineral extraction

Landscape and Visual Amenity - Existing Infrastructure

- 1.7.31 There is no existing infrastructure associated with this site or within the immediate locality. The infrastructure for this site would need to be developed.

ASSESSMENT (--) There is no existing infrastructure and this will need to be developed for the proposed site to be operated

Landscape and Visual Amenity - Strength of Landscape Character

- 1.7.32 This site strongly accords with the established character of the *Riverside Meadows*. The landscape is intact and in good condition. Key characteristics include small fields of unimproved pasture, watercourse trees, pollarded willows, potential veteran trees, large dense mixed species hedgerows and an oxbow lake.

ASSESSMENT (--) The site accords with the established landscape character and is in good condition

Landscape and Visual Amenity - Visual Impact

- 1.7.33 The site has few visual receptors although a bridleway crosses a significant section of the site making several parts of the site visible.

ASSESSMENT (-) The site has some visual receptors and some parts of the site will be visible

Historic Environment - Designated Sites & settings

1.7.34 None known in the area.

ASSESSMENT (+) No perceivable impact on a designation

Historic Environment – Archaeological Environment

1.7.35 Contiguous blocks of ridge and furrow surviving. No known artefacts in usual sense but Egginton Common gravels known to contain Palaeolithic hand axes in some numbers and are an important source for finds of this period. Palaeochannels present in the western half of site including former oxbow with standing water.

ASSESSMENT (--) Extensive, visible and interpretable earthworks and known archaeology with high potential for buried remains

Historic Environment - Historic Landscape

1.7.36 Many of the current field boundaries are present on the 1849 tithe map but they may be much earlier enclosures of open fields.

ASSESSMENT (--) Evidence of multi period landscape and intact field pattern

Best and Most Versatile Agricultural Land

1.7.37 None of this site lies within an area where more than 60% of the land is likely to be best and most versatile agricultural land.

ASSESSMENT (++) Site lies within an area where there is a low likelihood of bmv land

ENVIRONMENTAL TOTAL = 25/56 (L)

Analysis of Results

The scores for all the criteria for the social and economic categories have been added to produce a total for each category, as set out in the assessments above. For the environmental criteria, the scoring from the environmental matrix in Appendix 1 below has been used. This combines both the site assessment work (set out above) and the strategic environmental sensitivity work (set out in a separate paper).

For each category, the sites were then ranked, so the lowest scoring site achieves a ranking of '1' (i.e. low potential for mineral working). Where two sites scored the same, the difference was split (so for example if two sites had an economic score of 17, and would have been ranked 2nd and 3rd, they have been assigned a ranking of 2.5). Where three sites got the same score, all sites were allocated the middle ranking, for example, if three sites scored the same and are 4, 5 and 6 in the ranking order, they have all been assigned the middle ranking of 5.

The economic, social, and environmental rankings were then added together to provide an overall score – theoretical maximum 24, minimum 3. This has determined the overall potential for working each site. Sites with high potential are deemed as potential allocations in this Minerals Plan. Sites in the medium category may have the potential to be considered as allocations if there are insufficient sites in the “High” category to meet the remaining requirement, or if during the Plan period, monitoring indicates that the allocated sites are not being, or will not be, delivered as anticipated. Sites with low potential will not be considered for allocation in the plan, and are likely to be protected from mineral extraction.

Ref.	Site	Economic score	Economic ranking	Social score	Social ranking	Environmental score	Environmental ranking	Combined ranking total	Overall potential for working
SG01	Willington	20	5.5	22	7	4	4.5	17	High
SG02	Swarkestone - North	20	5.5	17	2.5	12	7	15	Medium
SG04	Elvaston	20	5.5	19	4.5	4	4.5	14.5	Medium
SG03	Swarkestone - South	20	5.5	17	2.5	4	4.5	12.5	Medium
SG06	Foston	15	1	20	6	4	4.5	11.5	Medium
SG07	Egginton	17	2	19	4.5	1.5	1	7.5	Low
SG05	Repton/ Foremark	18	3	11	1	2	2	6	Low

Low potential for working= 6-10
 Medium potential for working = 11-15
 High potential for working = 17-21

APPENDIX 1

This section sets out how the scores for the environmental element of the individual site assessments (potential for allocation with regards to environmental factors) have been combined with the scores from the strategic environmental sensitivity work to produce an overall environmental score for each site, which is used in the table above. The higher the overall score, the greater potential the site is considered to have for allocation for sand and gravel working.

The background to the strategic environmental sensitivity work is set out in the paper “A Methodology to Map Environmentally Sensitive Areas in the Trent Valley”.

SG01 – Willington

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG02 – Swarkestone North

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG03 – Swarkestone South

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG04– Elvaston

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG05 – Foremark/Repton

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG06 – Foston

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink) (4)	Zones 1 and 2 (3.5)	Zone 2 (medium red) (3)	Zones 2 and 3 (2.5)	Zone 3 (dark red) (2)	Zones 3 and 4 (1.5)	Zone 4 (purple) (1)
				Strategic	Sensitivity	Assessment		

SG07– Egginton

Site Assessment	High (3)	12	10.5	9	7.5	6	4.5	3
	Medium (2)	8	7	6	5	4	3	2
	Low (1)	4	3.5	3	2.5	2	1.5	1
		Zone 1 (pink)	Zones 1 and 2	Zone 2 (medium red)	Zones 2 and 3	Zone 3 (dark red) (2)	Zones 3 and 4	Zone 4 (purple) (1)

(4) (3.5) red) (3) (2.5) (1.5)
Strategic Sensitivity Assessment