



**24 May 2022**

**Agenda Item: 5**

## **REPORT OF CORPORATE DIRECTOR – PLACE**

**NEWARK AND SHERWOOD DISTRICT REF. NO.: 3/21/00147/CMM**

**PROPOSAL: PROPOSED SOUTHERN EXTENSION TO BANTYCOCK QUARRY,  
EXTENSION TO THE TIME LIMIT FOR MINERAL OPERATIONS UNTIL  
31ST DECEMBER 2044 AND AMENDMENTS TO THE RESTORATION  
SCHEME**

**LOCATION: BANTYCOCK QUARRY, STAPLE LANE, BALDERTON, NEWARK ON  
TRENT**

**APPLICANT: SAINT-GOBAIN CONSTRUCTION PRODUCTS LTD**

### **Purpose of Report**

1. To consider a planning application for a southern extension to Bantymock Quarry, Staple Lane, Balderton, Newark.
2. The planning application seeks permission for the extraction of approximately 5 million tonnes of gypsum from a southern extension to the quarry, over fifteen years, with restoration to nature conservation and arable farmland; an extension to the time limit for the completion of mineral working within the existing quarry, from 31<sup>st</sup> December 2029 until 31<sup>st</sup> December 2044; and amendments to the approved restoration scheme.
3. The planning application for the proposed southern extension is supported by an Environmental Impact Assessment which has been supplemented by two submissions made under Regulation 25 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regs) following requests for additional information made by the County Council. The proposed southern extension is allocated in the adopted Minerals Local Plan.
4. The key issues relate to blasting/vibration impact including impact on gas and oil pipeline infrastructure; the need to move a section of the oil pipeline to the south of Balderton Grange Farm; noise; dust; traffic; ecology, including impacts on the water environment; archaeological and heritage impacts; overall residential amenity impacts; and impacts on adjacent agricultural land holdings.
5. The recommendation is to grant planning permission, subject to the conditions set out in Appendix 1.

## The Site and Surroundings

6. For the purposes of this application, the application site comprises the existing quarry site (bound by Staple Lane, Grange Lane to the west with the restored Hawton Quarry workings beyond, and the A1 Trunk Road), which extends to approximately 240 hectares (ha.) together with the proposed 150.3 ha. southern extension area to the immediate south. The total application site area measures approximately 390 ha. (see Plan 1).
7. Situated in the parish of Balderton, Bantycok gypsum quarry is located on land to the immediate west of the A1, approximately 4.7 kilometres to the south-east of Newark. The closest settlement to the proposed southern extension is the village of Cotham, which contains around thirty residential properties and is located approximately 800 metres to the south-west of the extension site boundary. The settlements of Fernwood and Balderton are located 2.6 kilometres and 3.4 kilometres to the northeast of the site respectively, whilst Hawton is located approximately 3.6 kilometres to the north-west and Claypole located approximately 3.6 kilometres to the east.
8. The quarry is located adjacent to the major road network, with the A1 bounding the eastern boundary of the site, and the A46 situated approximately 3.4 kilometres to the west of the quarry site (see Plan 1). The southern relief road is situated between the Jericho Works (the applicant's associated specialist plaster manufacturing plant) to the north-west of the site and the residential area to the north. Vehicular access to the existing quarry is from Staple Lane via a standard bell-mouth junction, directly opposite the entrance into the Jericho Works, with a secondary access from Grange Lane, west of the quarry.
9. Within the wider vicinity, land to the south, east and west of the site is agricultural in character with a patchwork of fields of varying size and shape. Within the agricultural landscape are isolated farmsteads and small settlements. There is a long history of mineral (gypsum) extraction at Bantycok quarry and the surrounding area. It is noted that two former gypsum works lie within 5 kilometres of the Bantycok site, namely Staple Lane Landfill, a former Gypsum quarry, which is situated approximately 30 metres west of the proposal site, and Kilvington Quarry which lies approximately 4.2 kilometres to the south. Extraction is complete at both of these sites, with Kilvington Quarry having been fully restored and Staple Lane Landfill is in the process of being restored. Approximately 450 metres to the west of the site lies a solar farm and wind turbines on agricultural land at the Grange, Cotham Lane, Hawton.
10. The existing permitted area of workings at Bantycok Quarry extends to 240 ha., around two thirds of which has already been quarried. The north-western part of the quarry has been extensively worked out, backfilled with overburden and restored to a gently domed profile, to a maximum elevation of approximately 26 metres above ordnance datum (AOD). The current working area is located in the north-eastern 'extension' area towards the eastern site boundary, adjacent to the A1 corridor (see Plan 2). Extraction operations are currently taking place in Cut 17, which runs in an east-west orientation, with overburden removal currently taking place in Cut 18 in the eastern part of the

cut, with gypsum extraction to the west. Soil stripping is part way through Cut 18 under an archaeological watching brief. The restored area to the south-west is in aftercare and is subject to ongoing management. The eastern part of the site is in agricultural use, comprising several large fields.

11. As an established mineral operation, site infrastructure is already in place including the site access off Staple Lane, wheelwash facilities located close to the site entrance, the haul road between the access and the processing plant; the processing plant; and the internal secondary haul roads between the working face and the plant/overburden disposal areas.
12. The existing processing area is located within the quarry void within the western sector of the site. This comprises a primary crushing plant of crushers, hoppers, interconnecting conveyors, and associated infrastructure, which is to a maximum height of 7 metres and in a non-reflective grey colour. The processing plant occupies an area measuring approximately 15 metres by 100 metres. Adjacent to the plant site is an extensive storage area with stockpiles of varying grades of crushed and uncrushed gypsum; together with associated site cabins and mobile plant parking areas.
13. The proposed southern extraction site would form a lateral extension to the current surface mine operations. The land use currently comprises agricultural fields, with a mix of arable, scrub and grassland, subdivided by hedgerows and drainage ditches. It is bordered to the north by Bantycok quarry – the working quarry; to the east and south by adjoining agricultural land and to the west by Grange Lane. The land is level to very gently sloping and at an average elevation of approximately 20 metres AOD.
14. The site is located in an area of gently sloping topography; there is a local topographic high along the western boundary of the site and the existing operational quarrying area to the north is approximately 5 metres lower than the surrounding areas. The proposed southern extension slopes towards the south-east towards the Shire Dyke and there are a number of small drains within the proposed extension site that are approximately 1 metre below the surrounding ground levels.
15. A single residential property (Balderton Grange Farm) is situated within the proposed southern extension area in the north-western part of the proposed extension area, towards the western boundary, although it is outside the proposed extraction area and would be retained. A number of individual properties are located to the west, east, south-east and south, with the nearest sensitive receptors being Balderton Grange Cottage, Cowtham House, Shirebridge Farm, Fen Farm and Willow Tree Farm respectively.
16. There are no statutory wildlife designations within 2 kilometres of the application site. There are, however, various non-statutory Local Wildlife Sites (LWS) surrounding the proposal site, situated within 2 kilometres of the application site, namely, the mineral line, Cotham to the west; both Ayers Rock Cotham, and Hawton Tip Grassland to the north-west, and finally, Staunton Quarry to the south. A further two LWS are partially located within the proposed southern

extension, namely Cowtham House arable LWS and Shire Dyke, Balderton South LWS.

17. In terms of heritage designations, more distant to the site, lies a Conservation Area 800 metres to the north of the application site, within the centre of Balderton, but one that is separated from views of the application site due to the surrounding built development of the wider Balderton area. There are a relatively significant number of Listed Buildings in closer proximity to the proposal site at Balderton, Cotham and Hawton. Those at Balderton comprise the Grade I Listed Church of St Giles, the Grade II Listed Methodist Church, wall, gate piers and memorial, and a number of Grade II Listed residential properties (namely, nos. 74, 77, 79 and 81 Main Street, and 9 Bullpit Road). Within the village of Cotham, approximately 900 metres to the west, lies the Church of St Michael, which is Grade II\*; and the wall, gargoyles and gates and The Row, which comprises a terrace of four cottages, which are Grade II Listed. Finally, the Gypsum Grinding Mill, which is Grade II Listed, is situated in Hawton, approximately 770 metres to the north-west of the site.
18. There are two non-designated heritage assets within and adjacent to the proposed southern extension area, Balderton Grange and Cowtham House.
19. There are no Public Rights of Way (PRoWs) passing through the site itself and very few PRoWs in the wider area. The nearest public footpath is Cotham Footpath 7 to the west of the site, which connects the village of Cotham to Staple Lane, Bridleway 5 and Footpaths 1, 2 and 4 which extend in a southerly and westerly direction respectively out of the village of Cotham.
20. There are no long-distance paths in the area, however Sustrans Cycle Route 64 passes along the former mineral line to the west of the application site.
21. The majority of the application site lies in Flood Zone 1 with the exception of the eastern corner of the proposed extension site which is situated in an area designated as Flood Zone 3, given its proximity to the Shire Dyke.
22. There are no main watercourses in the immediate vicinity of the quarry site, with the closest river being the River Devon (a tributary of the River Trent) approximately 1.7 kilometres to the west. In addition, the River Witham is located approximately 2 kilometres east of the site; the natural catchment divide for the River Witham and River Trent runs through the centre of the site.
23. Other than that, there are a number of smaller watercourses and drainage ditches within the immediate vicinity of the proposed southern extension. The Shire Dyke is located along the southern boundary of the proposed southern extension and drains north-easterly before joining the River Witham. A network of smaller drainage ditches located along field boundaries within the southern extension discharge to the Shire Dyke.
24. Infrastructure for both gas and oil are located both within and adjacent to the proposed southern extension. A gas pipeline cuts across the most south-westerly part of the southern extension site in a northwest-southeast direction

before linking into a main pipeline immediately south-east of the proposed southern extension site. An oil pipeline lies inside the red-line area of the proposed southern extension area adjacent to the western boundary and extends along the length of the application site falling within the blast stand-off area for Balderton Grange Farm.

25. Finally, Bantymock quarry is located approximately 7 kilometres to the north-east of RAF Syerston and falls within the Aerodrome Safeguarding Area, which is a 13 kilometre radius.

## **Background**

26. In relation to the former adopted Nottinghamshire Minerals Local Plan (Adopted December 2005), (MLP) Bantymock was identified as one of three gypsum mines in the County, and though it was dormant at the time the plan was adopted, it was expected to become operational once the resources at Kilvington Quarry had been exhausted. It was identified that the permitted resource at Bantymock would last approximately 11 years, until 2015 and in order to ensure the long-term future of the resource and prevent sterilisation, a southern extension was allocated under Adopted MLP Policy M10.3.
27. A similar southern extension is also allocated within the current Nottinghamshire Minerals Local Plan (adopted March 2021) (MLP) under Policy MP7c. The proposed extension in this application is similar to the adopted MLP Policy MP7c and the former MLP Policy M10.3 allocation albeit slightly smaller in size and consequently tonnage.
28. Policy MP7c of the adopted MLP also outlines that any planning application for the allocated site should be made in accordance with the site development brief provided within appendix two of the MLP. British Gypsum have considered the site development brief within their planning statement and outline considerations made within the application in relation to the points raised within the brief.

## **Planning history**

29. The planning application relates to an established gypsum quarry which currently operates under extant planning consent 3/18/01723/CMA granted by the County Council, in its capacity as the Minerals Planning Authority (MPA) in April 2019. Under the extant planning permission, current operations are permitted until the end of December 2027, with the final restoration to be completed by 31<sup>st</sup> December 2029. The proposed extension to the quarry lies to the immediate south of and adjoins the extant planning permission area for mineral working.
30. Planning permission for gypsum extraction at Bantymock Quarry was first granted to British Gypsum in 1981 (Plg. Ref. 3/3/-/80/43). Operations commenced in 1983, but ceased in 1994 when production was transferred to the nearby site at Kilvington. The Bantymock works continued to be maintained

as part of the operator's strategic reserves of gypsum, with the site remaining 'dormant' until operations/quarrying activities resumed.

31. In October 1997, the County Council listed the Bantycok site as an active phase two site under the minerals review process, putting an onus on British Gypsum to submit an application for the determination of modern planning conditions accompanied by an Environmental Impact Assessment.
32. This submission was made and under the provisions of the Environment Act 1995, extant planning permission 3/3/-/80/43 was formally reviewed and a new set of planning conditions were issued in December 2006 (Plg. Ref. 3/06/00991/CMM). At the time, the working of gypsum in the northern area was omitted from the scheme of phased working and restoration, albeit that the red-lined site boundary area remained consistent with that permitted under extant planning permission 3/3/-/80/43.
33. At the time of the review, planning permission (Plg. Ref. 3/06/01262/CMM) was also granted for a conveyor system spanning Staple Lane, to transport gypsum from the quarry to the Jericho Works. This provided an alternative method of transport to road haulage, mainly to overcome road safety issues at the time.
34. Since issuing the review permission, several further planning applications have been submitted pursuant to Section 73 of The Town and Country Planning Act 1990.
35. Planning permission (Plg. Ref. 3/12/00587/CMA) was granted in January 2013 to vary Conditions 10, 14, 17, and 23 of planning permission 3/06/00991/CMM to amend the phasing of the extraction; changes to the use of the conveyor; and modifications to the shot weight associated with the blasting operations. It placed a requirement on the applicant to implement a conveyor system should annual rates of gypsum crossing Staple Lane to the Jericho Works exceed 130,000 tonnes per annum. There continues to be no requirement for this element of the development at the present time because although the quarry extracts around 400,000 tonnes of gypsum per annum, only around 85,000 tonnes goes directly to the adjacent Jericho works. The remainder is transported off-site to British Gypsum's other production works at East Leake; Barrow, Leicestershire; and Fauld, Staffordshire.
36. In August 2013, planning permission (Plg. Ref. 3/13/00603/CMA) was granted for non-compliance with Conditions 14 and 39 of planning permission 3/12/00587/CMA removing the need to seed a specific overburden storage mound (shown on plan titled 'Bantycok Mine Newark Condition 14 Overburden Storage' as received by the County Council on 29<sup>th</sup> April 2013); and amendments to the maintenance regime for soil storage mounds in place for over 6 months.
37. Finally, British Gypsum was granted planning permission (Plg. Ref. 3/15/01880/CMA) in February 2016 for revised restoration and phasing schemes; followed by a further variation to extant planning permission 3/15/01880/CMA in April 2019. This saw planning permission (Plg. Ref.

3/18/01723/CMA) being granted by the County Council for an amendment to the approved phased working and restoration schemes to allow for gypsum to be extracted from 25 hectares of land in the north-eastern part of the quarry.

38. This area was already within the permitted quarry site but had been omitted from the area to be worked under a review of the then planning permission (Plg. Ref. 3/3/-/80/43) in 2006, pursuant to the Environment Act 1995. Under this planning permission, which is now the extant planning permission 3/18/01723/CMA, the hours of operation were amended, and clarification provided as to how close to the A1 mineral could be worked by the operator.

### **Proposed Development**

39. Based on current rates of extraction, it is anticipated that the existing permitted gypsum reserves at Bantycok Quarry would be exhausted by 2024/25. Planning permission is therefore sought for a 150-hectare extension to the south of the existing quarry, for the phased extraction of approximately 5 million tonnes of high-grade gypsum at a rate of approximately 400,000 tonnes per annum, equating to 15 years production for Bantycok Quarry at existing processing levels; with progressive restoration.
40. In addition, the planning application seeks planning consent to:
- extend the time limit for quarrying activities by fifteen years from the 31<sup>st</sup> December 2029 to the 31<sup>st</sup> December 2044 to ensure the full recovery of the permitted reserve. This would include retention of the processing plant, associated facilities and maintaining current access into the site for the duration of this period.
  - Amendments to the approved restoration scheme (currently approved under extant planning permission 3/18/01723/CMA) to allow for the southern extension to be integrated into the restoration of the wider quarry site.

### Operational processes

41. As an established mineral operation, site infrastructure is already in place, with this including:
- the site access off Staple Lane;
  - wheel wash facilities (located adjacent to the site entrance);
  - the haul road (between the site access and the processing plant);
  - processing plant;
  - internal secondary haul roads between the working face of the quarry and the processing plant/overburden disposal areas.

42. The operational activities involved in working the proposed southern extension would follow the established method of working already in place at the quarry.
43. Extraction operations would reflect current practices already in place at Bantycrock.
44. The gypsum deposit is extracted using a technique known as 'strip mining'. Overall, the proposed working area would be divided into 15 strips or cuts, typically sized to yield approximately 12 months of production per cut.
45. Initially soils and overburden would be stripped from the cut by hydraulic excavator and loaded onto articulated dump trucks for transportation, followed by placement into storage, or direct placement into worked out parts of the quarry to facilitate progressive restoration. The restoration scheme is integrated with the phasing of the mineral extraction to minimise the double handling of material. Wherever possible, the newly stripped soils and overburden are placed directly onto worked out strips, ready for restoration. The reinstatement of soils and overburden would involve dumping, spreading, shaping and compaction activities in those areas to be restored to agricultural uses.
46. In general, the active area of the quarry is approximately 1 km in length, with overburden being stripped at one end, then transported to the opposite end for use in the restoration in accordance with the approved restoration scheme.
47. Overburden tipped within the void would be re-graded by bulldozer, decreasing the bulking factor of the material. In terms of this process, it is proposed to develop a multiple bench open pit to facilitate the simultaneous excavation of the four main types of overburden (Cotham, Westbury, Blue Anchor and Cropwell Bishop formations) with the gypsum beds being found within the Cropwell Bishop formation.
48. It is proposed that existing topsoil and subsoil present within the southern extension area would be progressively stripped from the site and initially stored separately to form 4 m high screening bunds alongside Grange Lane. Following this initial phase, soils subsequently stripped would be placed directly onto backfilled overburden within the previously worked phases as part of the progressive site restoration. Extraction would be carried out in accordance with the proposed phasing plan and would be undertaken in strips from north to south in the western part of the site, and west to east in the eastern part of the site (see Plan 3). Phased restoration would follow mineral extraction.
49. In order to access the gypsum substantial quantities of overburden would be stripped to an approximate depth of 28m. In order to avoid the creation of large temporary stockpiles and logistical issues, initial overburden stripped from phases one and two would be used within the restoration works of the existing site (currently the northern extension site). This would enable the proposed large deep northern lake currently shown on the approved restoration plan (see Plan 4) to be infilled, replacing it with additional grassland habitat and a smaller shallow wetland feature. The loss of this larger open water feature and associated marginal habitat within the existing working area would be



compensated for by the creation of a new lake with associated marginal habitat within the southern extension area as shown on the proposed restoration masterplan.

#### Mineral extraction

50. Once the soils and overburden have been removed, the top two gypsum seams are 'fractured' with explosives so it can be removed by excavators for processing. Blasting operations follow recognise best practice and are designed by an appropriately qualified person.
51. The gypsum seams would be extracted by open pit quarrying with the layers of rock overlying the gypsum seams being stripped back from the surface downwards, to expose the gypsum below.
52. Around the outer face of the quarry, a gradient of 2 in 1 would be used for the Barnstone, Cotham, and Westbury, with benches formed at the base of each face to promote stability. In the stronger Blue Anchor and Branscombe, a gradient of 1 in 2 would be used, with a bench at the base of the Blue Anchor.
53. Gypsum is extracted using traditional quarrying methods of drill and blast, and the method currently employed at the existing quarry would be replicated across the southern extraction area.
54. To fragment the material from the working face, it is necessary to use explosive charges within a series of shot holes, which would be drilled into the bench behind the working face at pre-determined spacings. Pre-determined quantities of explosive charges would then be placed in the shot holes and connected up in a pre-determined delay sequence. The holes would then be 'stemmed' with aggregate. There are no proposed changes to the timing of the blasting, and it would continue to be restricted to between the hours of 13:30 hrs to 15:30 hrs Mondays to Fridays, the timing of which would be notified to local residents as is the current practice. Extant planning condition 22 (Plg.3/18/01723/CMA) currently controls blasting operations to these hours, and this practice would continue across the proposed southern extension area, secured by way of a similar planning condition.
55. The gypsum to interburden/overburden ratio is expected to be the same as the current working area, approximating to 1 tonne of saleable gypsum to 10.5cu.m of interburden/overburden.

#### Mineral processing

56. Limited processing is undertaken within the quarry void; extracted gypsum is loaded onto dump trucks and transported to the in-pit processing plant where it undergoes processing. This processing includes size reduction by hydraulic breaking, screening to remove clay and crushing.

57. The excavated mineral would be transferred to a stocking area within the confines of the quarry void where it would be processed through a Trommel Screen, which separates and removes mudstone from the product thereby increasing the purity of the gypsum. The mineral would then be passed through cone crushers to reduce the particle size, and, if the material is destined for the Jericho Works, it would undergo a further quality improvement process by being hand-picked by an operator to remove any residual mudstone.
58. Gypsum would be stockpiled prior to primary crushing to allow natural weathering to remove associated clay contamination. Following this and prior to feeding the material into the crusher, a hydraulic hammer 'pecker' would be used to break any large slabs of gypsum into more manageable sizes; gypsum would then be fed into the rotating trommel screen using a wheeled loading shovel. The trommel screen then feeds material into a primary crusher and screens. In terms of further plant, wheeled loading shovels would also be used to manage stockpiles and load vehicles with processed gypsum for onward transportation.
59. Crushing and screening operations are regulated under an environmental permit.
60. Stockpiles of gypsum would not exceed 17m in height.
61. Soils and overburden storage bunds are re-vegetated at the earliest opportunity to stabilise the surface and mitigate the effects of erosion and dust.

#### Phasing of operations

62. The southern extension area would be subdivided into 16 working phases with each phase lasting just under a year (see plan two - phasing of the southern extension). Mineral extraction would accord with the approved phasing scheme.
63. In terms of the proposed phasing scheme, extraction would commence with the phased working of the north-western part of the proposed extension area. The initial cut would comprise Cut 1A and Cut 1B; Cut 1A would be worked in two directions initially from a northeast to southwest orientation then in a southeast to northwest orientation. It would then be worked in a northeast to southwest orientation as Cut 1B.
64. The western part of the extension area would then be worked in a series of nine further cuts across the width of the western extent of the extension area. Cut 2 would extend in a west to east orientation followed by Cut 3 which would extend in an east to west orientation and so on until Cut 10 which would follow a west to east direction providing a smaller Cut or phase in the most south westerly corner of the extension site.
65. The latter part of the extraction operations would take place in the north eastern part of the extraction area, which would comprise the final five phases working sequentially in a west to east direction with these cuts being 'vertical' across the length of the site working in a north to south direction rather than 'horizontal'

working across the site in an east to west direction. Cut 11 would commence this final series of cuts, and would proceed or extend in a south to north direction; Cut 12 would extend in a north to south direction and so on until Cut 15 which would conclude the anticipated 15 years of remaining phased extraction at Bantycok Quarry.

Other operational matters

66. The planning application does not seek to alter existing working hours. It is proposed that operations would continue to follow the approved operating hours:

Operation	Mondays to Fridays	Saturdays	Sundays	Bank or Public Holidays
Soil stripping and replacement within 350m of residential properties	07:00-18:00 hrs	07:00-13:00 hrs	-	-
Soil stripping and replacement	07:00-19:00 hrs	07:00-13:00 hrs	-	-
Processing of gypsum	06:00-19:00 hrs	07:00-13:00 hrs	-	-
Extraction of gypsum	07:00-19:00 hrs	07:00-13:00 hrs	-	-
Use of hydraulic hammer (the pecker)	07:00-19:00 hrs	07:00-13:00 hrs	-	-
The transportation of gypsum off site	07:00-19:00 hrs	07:00-13:00 hrs	07:00-13:00 hrs	-
Servicing, maintenance and testing of plant	07:00-19:00 hrs	07:00-16:00 hrs	07:00-16:00 hrs	-
Blasting	13:30-15:30 hrs	-	-	-

67. The HGV movements associated with the proposals would not alter from the approved levels and would continue at 200 vehicle movements per day (100 two-way trips, 100 in 100 out) Mondays to Fridays, with a 100 vehicle movements per day (50 two-way trips, 50 in 50 out) Saturdays and Sundays, with no lorry movements on Public and Bank Holidays, as previously conditioned. These HGV movements are associated with transporting mineral from the site to British Gypsum’s production works at East Leake; Barrow, Leicestershire and Fauld, Staffordshire, where it would be used for blending purposes. These figures do not include HGVs delivering gypsum directly to the Jericho Works from Bantycok.

Restoration

68. The approved restoration scheme is reflected in the plans listed under extant planning permission 3/18/01723/CMA planning Condition 4 (Plan 4, Rev. F entitled ‘Restoration Masterplan’ dated 02.01.18); and extant planning Condition 60, which seeks to restore the site progressively in accordance with the approved plan, ensuring all backfilled material is levelled and graded in

accordance with the restoration contours identified on this plan. The approved restoration plan is shown in Plan 4.

69. In view of the proposals to develop the southern extension, a revision to the approved restoration scheme is being sought to integrate the southern extension into the wider quarry site underpinned by the need to address the increased volumes of restoration material that would result from working the extended area, including accommodating it within the site boundary.
70. Amendments to the approved restoration scheme (currently approved under extant planning permission 3/18/01723/CMA) would allow for the southern extension to be integrated into the wider quarry site. This reflects the applicant's assessment of the revised cut and fill balance and phasing associated with working the proposed area to the south, which has resulted in a proposed relocation of the previously approved large water body from the northern extension area of Bantycok quarry into the proposed extension area to the south, and the realignment of a number of other habitats to facilitate this. This has sought to address the increased volumes of restoration material that would result from working the extended area and the need to accommodate it within the site boundary. No restoration material would be required to be imported into the site. The proposed new restoration scheme for the site is shown in Plan 5.
71. The proposed restoration is for a mix of agriculture and conservation biodiversity habitats. The habitats to be created would include woodland, wet woodland, seasonal wetlands, and open water. Native species hedgerows would be included in the restored agricultural areas together with marginal strips to the fields. In the restored area, the proposed mix would comprise 87.5% of wildlife habitats and 17.5% arable farmland.
72. The key elements of the proposed restoration scheme comprise:
  - A gently undulating restoration landform which would be integrated into the existing restored landform, with a maximum height of 24 metres AOD to the east of Balderton Grange and a low of 15 metres AOD towards Shire Dyke on the south-eastern boundary;
  - A large 49.5 ha waterbody with marginal habitat and 7.0 ha of seasonally wet scrapes with marginal planting between Balderton Grange and Cowtham House. This would provide a significant wildfowl habitat and would be an integral part of the surface water management regime, discharging into and recharging the Shire Dyke LNR;
  - The creation of 21.3 ha of wildflower meadows and 35.1 ha of wet grassland around the lake margins, to increase habitat diversity;
  - The reinstatement of approximately 24.5 ha of agricultural land, divided into 2 fields, accessed by new farm tracks. The fields would be covered with a minimum of 350 mm topsoil, previously stripped from site and stored along the western edge of the site;

- Approximately 2,946 linear metres of native species rich hedgerows and hedgerow trees, with stockproof fences and gates between the fields;
- Approximately 8.8 ha of native woodland, woodland edge and wet woodland mixes indigenous to the locality. Trees would be planted as young saplings, at 1.5 m centres. The vegetation cover would aid assimilation of the restored land with the existing northern working areas and the surrounding landscape; and
- 5,715 linear metres of new public access with permissive footpath links to adjacent public footpaths, forming new circular walks around the southern lake area, with viewing points and linkages to paths in the restored northern site.
- The waterbody originally proposed in the northern extension area would be re-located to the southern extension under the amended restoration proposals.
- Enhancements to an existing 600 m section of dry ditch to compensate for the loss of a section of Shire Dyke LWS.
- The proposed aftercare period for quarry restoration would involve the statutory five year period across the whole of the site together with an extended aftercare period of 10 years (i.e. a total of 15 years) which was previously agreed for the wetland features in the existing permitted area. An extended aftercare period of 10 years (i.e. a total of 15 years) is also being offered for the wetland features in the proposed southern extension area under these proposals.

### Environmental Statement

73. The planning application is supported by an Environmental Impact Assessment (EIA), which gives consideration to the main environmental effects of the proposed development and the likely significance of these identified impacts. The conclusions reached within the EIA are considered within the planning observations section of this report.
74. To address a number of issues and concerns raised by the initial planning consultation process, including objections to the scheme from the Environment Agency, CLH-PS Pipeline Systems, National Grid, NCC's Archaeologist and Heritage Officers, and Nottinghamshire Wildlife Trust, a series of modifications and additional environmental assessments have been submitted, in response to a formal request made by the County Council, under Regulation 25 of the Town and Country Planning (Environmental Impact Assessment) Regulations 2017 (Reg. 25 request).
75. The Reg. 25 submission incorporates the following additional information:
  - (a) An Airfield Safeguarding assessment (in relation to RAF Syerston).

- (b) Supplementary and updated ecological information to address detailed matters raised by Nottinghamshire Wildlife Trust including submission of a Biodiversity Net Gain (BNG) report.
- (c) Supplementary information which seeks to clarify the potential blasting effects and associated impacts from the development on the adjacent oil pipeline and gas pipeline infrastructure situated both within and adjacent to the proposed southern extension site.
- (d) Supplementary information regarding air quality management in relation to minimising or mitigating public exposure to non-threshold air pollutants.
- (e) Supplementary and updated flood risk assessment.
  - The flood risk assessment has been amended to overcome any adverse impact on flood storage posed by the development to ensure that there is no potential for short term adverse effects on flooding locally.
  - Amendments have been made to the temporary soil bunds proposed within the floodplain in the south-eastern part of the site to provide adequate noise abatement of the development. In this respect, it is proposed to create gaps within the proposed bunding at the confluence of the drains within the south-western extent of the development with the Shire Dyke, to maintain conveyance and storage during a flood event.
  - It is considered that the comments raised do not affect the overall conclusions of the EIA.
- (f) Mitigation of Archaeological and Heritage Effects.
  - An Archaeological Management Plan has been submitted, providing details as to how it is intended to proceed with mitigating the archaeological implications of the development.
  - A Heritage Impact Assessment has been submitted to provide further information to demonstrate the scale of any harm from the development to the significance of the two identified non-designated heritage assets, Balderton Grange and Cowtham Cottage.
  - It is considered that the comments raised do not affect the overall conclusions of the EIA.
- (g) Since the planning application was submitted, the Minerals Local Plan was adopted in March 2021. The adopted version of the MLP differs slightly from the Publication version, therefore for completeness, the policies in the adopted MLP have been considered to examine how the scheme accords with them.

76. Subsequently, to address several issues and concerns raised by a second planning consultation process in relation to the Reg. 25 submission, further environmental assessments have been submitted in response to a second formal request made by the County Council under Regulation 25. The second Reg. 25 submission incorporates the following additional information:
- (a) The applicant's position statement regarding NCC's Heritage Officer's request for a Historic Building Recording Survey (Level 3) regarding the non-designated heritage assets, Balderton Grange and Cowtham House.
  - (b) An amended Archaeological Management Plan.
  - (c) An updated Noise Assessment (ES, Chapter 13) to take into account comments received by the County Council's Noise Consultant in relation to the changes to the peripheral bunding required as a result of the EA's consultation response to flood risk.
  - (d) Supplementary and updated ecological information to address detailed matters raised by Nottinghamshire Wildlife Trust, and further discussions with the County Council's Ecologist regarding the biodiversity net gain (BNG) calculations. This includes submission of an Initial Habitat Creation and Enhancement Method Statement.
  - (e) Supplementary information regarding the Airfield Safeguarding Assessment.

## **Consultations**

77. The planning application has been subject to three rounds of planning consultation, covering the original submission and two subsequent Reg. 25 submissions. The subsequent responses are summarised jointly in the following paragraphs, except for those where consultees have provided specific comments on the amended and/or supplementary environmental information.
78. **Newark and Sherwood District Council** *No objection.*
79. *No objection to the planning application provided that NCC is satisfied that the proposed development complies with the relevant Development Plan policies and appropriate measures are put in place in which to monitor the proposals from an environmental, highway safety and neighbour amenity perspective.*
80. **Balderton Parish Council** *No objection.*
81. *There was unanimous support for the application at the Planning Committee meeting in February 2021.*
82. *The application has been reviewed by members of the Planning Committee and no objections or comments have been raised.*
83. **Newark Town Council** *Objection.*

84. *Originally, Newark Town Council did not object to the planning application. It was requested that the operation of the quarry be accompanied by appropriate traffic mitigation to avoid large vehicles driving through built-up areas travelling to and from the site.*

Reg. 25 response

85. *Members understand that there is no need for any increased supply of building materials as provided by this site. It was therefore agreed to sustain an objection to this application, as Members felt that if a single operator was given permission to extend their minerals operations for a further 15 years, this would have implications for other operators in the County. Any individual changes should be considered only when the wider implications for other similar sites in the Minerals Strategy have been assessed.*
86. **South Kesteven District Council** *No objection subject to the control measures in relation to noise and blasting conditions and air emission mitigation being implemented and monitored.*
87. **NCC (Planning Policy)** *No objection.*
88. *Attention is drawn to the fact that the Nottinghamshire Minerals Local Plan (March 2021) has now been adopted and this replaces all of the saved policies contained in the previous Minerals Local Plan (2005). In planning policy terms, the application must therefore now be considered in light of the National Planning Policy Framework (NPPF 2021) and the adopted Nottinghamshire Minerals Local Plan (March 2021). Policy MP7c of the adopted Minerals Local Plan allocates a southern extension at Bantymock Quarry to maintain supplies once existing permitted reserves have been exhausted, which is anticipated to be around 2023 at current rates of extraction.*
89. *The additional information provided as part of this Regulation 25 Submission seeks to address the changes made to the Minerals Local Plan following its examination and subsequent adoption. It is noted that the additional information submitted by the applicant includes a separate Heritage Impact Assessment and report on Biodiversity Net Gain. The Policy team would defer to the relevant teams within the Council and relevant external bodies, as to the adequacy of the information supplied and do not therefore have anything further to add.*
90. **Environment Agency (EA)** *No objection subject to planning conditions regarding the development being carried out in accordance with the amended flood risk assessment; the provision of a plan detailing the protection of water vole for the duration of the development; and controls over the restoration of the site.*
91. *The EA originally raised an objection to the planning application on the basis that the Flood Risk Assessment did not propose adequate mitigation against the flood risks posed by the development. A revised FRA was sought regarding the provision of a detailed scheme for flood storage compensation to overcome the*



loss of floodplain volume caused by locating the noise mitigation bunds in the south-eastern corner of the southern extension site. This demonstrated that the adequate flood storage compensation was capable of being achieved.

92. *The EA has drawn attention to the fact that it holds records from 2016, which indicate the presence of water vole within the Shire Dyke. Although the site of this record is not within the survey area, it is located less than 1km downstream of the survey area. As such, the EA considers water vole to be a valid consideration given that it is a protected species under the Wildlife and Countryside Act 1981 (as amended) and has been found to be present close to the proposed development site.*
93. *The proposed development will only be acceptable if a planning condition is included requiring a plan to protect against any damage to water vole.*
94. *There is support for the changes to the proposed restoration plans which include converting over 80% of the southern extension into biodiverse wildlife habitat, with the majority of biodiversity gains arising from the marginal and edge habitat included in these proposals.*
95. *It is recommended that consideration is given to the creation of reedbed habitat with approximately 25-30% open water, 40-50% wet reed, 15-25% dry reed and 5-10% wet and dry scrub, to further increase the biodiversity value of the site. Attention is drawn to the fact that the size of the lake would lend itself to the creation of a large reedbed such as this and would increase the biodiversity of the site due to the likely large number of different species that it could support.*
96. *In addition, it is noted that the existing ditch habitat is proposed for enhancement, but no information has been provided as to how. Records indicate that water vole and eel have been found in the ditch. As such, it is recommended that enhancements are targeted towards these species.*
97. *The restoration of mineral workings is recognised as a good opportunity to create new priority wetland habitat in line with the England Biodiversity Strategy, and its target of achieving no net loss of priority habitat and an increase in priority habitats. The location of the proposed mineral workings would make it ideal for wetland habitat creation. The proposed development will therefore only be acceptable if a planning condition is included requiring a scheme to be agreed to ensure that the site is restored once mineral workings cease.*
98. *Regarding the protection of the controlled water environment in the vicinity of the site, it is noted that significant dewatering of groundwater is not experienced at site nor is it expected in the southern extension. Any lowering of groundwater levels during mineral extraction is therefore limited and would not extend far from the area of working.*

Reg. 25 Response

99. *Regarding the concerns relating to flood risk, it is considered that the supplementary information satisfactorily addresses the previous concerns. Therefore, the previous objection is withdrawn.*
100. *Regarding the biodiversity comments, the revised restoration plan has been reviewed and there is nothing further to add but for the EA's previously requested conditions, which continues to be the EA's continued position.*
101. **NCC (Flood Risk)** *No objection subject to conditions regarding the submission and approval by the County Council in its capacity as MPA and Lead Local Flood Authority (LLFA) of a detailed surface water drainage scheme based on the principles set out in the approved flood risk assessment; and a detailed surface water management plan to ensure that as a major development it is demonstrated that there is sufficient surface water management, and that there is no increased risk of flooding either within the application site or off-site.*
102. **Trent Valley Internal Drainage Board** *No objection.*
103. *It is confirmed that the site is situated outside the Trent Valley Internal Drainage Board District but within the Board's catchment. There are no Board maintained watercourses in close proximity to the site.*
104. *The Board's consent is required for any works that increase the flow or volume of water to any watercourse or culvert within the Board's district.*
105. *It is pointed out that surface water run-off rates to receiving watercourses must not be increased as a result of the development. The design, operation and future maintenance of site drainage systems must be agreed with the Lead Local Flood Authority and Local Planning Authority.*
106. **Witham Internal Drainage Board** *No objection.*
107. *It is confirmed that the site is within the Upper Witham Internal Drainage Board district, with the Board maintained watercourses Shire Dyke, Hundred Acre Drain, Cowtham Drain and Fen Drain, flowing within and adjacent to the proposed site.*
108. *It is pointed out that under the terms of the Land Drainage Act, 1991, and the Board's Byelaws, their written consent is required for:*
- *-any proposed temporary or permanent works or structures within any watercourse including infilling or a diversion, for example bunding.*
  - *-the introduction of any water into the district whether directly or indirectly.*
  - *-any temporary or permanent works or structures in, under, over or within the byelaw distance of 6m (soon to be 9m) of the top of the bank of a Board maintained watercourse.*
109. *A suitable strip of land should remain available, within the vicinity of all on-site watercourses, to allow for maintenance works.*

110. *No development should commence until an approved surface water drainage scheme has been implemented, nor should the development result in increased surface water run-off rates to receiving watercourses.*
111. *All drainage routes through the site should be maintained both during and on completion of the works, and the development should not adversely affect riparian owners or areas presently served by drainage routes within or adjacent to the site. The effects of raising site levels on adjacent property must be considered and measures taken to negate influences.*
112. *The route of flow downstream of the site from the discharge point to an appropriately maintained watercourse must be considered. The MPA should attach a copy of this advice to any planning consent.*
113. **Highways England (HE)** *No objection.*
114. *The proposed southern extension would not impact on any National Highways assets nor would there be any changes to transport issues previously approved.*
115. **NCC (Highways)** *No objection.*
116. *The application will not change the amount of permitted HGV vehicle movements and will therefore have no impact on the public highway.*
117. **Natural England (NE)** *No objection.*
118. *It is considered that the proposed development will not have significant adverse impacts on designated sites.*
119. *It is advised that Biodiversity Net Gain (BNG) is embedded into the development process at the earliest stages. Given that the Government is intending to mandate net gains for biodiversity on new developments in England to deliver an overall increase in biodiversity, it is suggested that the County Council advise the applicant to follow the net gain approach and take the opportunity within this proposal to be an exemplar development which can demonstrate a net gain in biodiversity. A biodiversity metric is available and using a recognised metric to deliver net gain provides a clear, transparent and evidence-based approach to assessing a project's biodiversity impacts.*
120. *Generally satisfied that the site working and reclamation proposals meet the requirements for sustainable minerals development set out in the NPPF and current PPG.*
121. *It is noted that the proposed development would extend to approximately 149.6 ha, including some 43.3 ha of 'best and most versatile' (BMV) agricultural land. Whilst the restoration proposals on (some of) the BMV land are for non-agricultural purposes, reclamation to a biodiversity after use acceptable, is acceptable provided the land remains capable of being farmed to its land classification potential, thereby remaining a high quality resource for the future.*

122. *The EIA demonstrates that an equivalent (or substantial) area of the BMV land disturbed as a result of the development would be reinstated to a similar quality, suited to a productive agricultural after use. NE confirms that it would be appropriate to specify agriculture as an after use, and for the physical characteristics of the land to be restored, so far as practicable, to what they were when last used for agriculture.*
123. *NE is satisfied that the Soils and Agricultural Land Classification Report constitutes a record of the pre-working ALC grading and physical characteristics of the land within the application site boundary. It is advised that planning conditions should safeguard soil resources and promote a satisfactory standard of reclamation appropriate to the proposed after-uses. Regarding handling soils, DEFRA's good practice guide provides detailed advice, and it is recommended that it's 'loose handling' methods be adopted, to minimise damage to soil structure and to achieve high standards of restoration.*
124. *Full consideration of protected species and other natural environment should be given.*
125. **NCC (Nature Conservation) No objection.**
126. *It is confirmed that the scope of the supporting Ecological Impact Assessment (EclA) survey is appropriate, and the results remain in date, having been carried out during 2019. It is noted that a small part of the site was omitted from the surveyed area, however, as this is similar in character to the remainder of the site, it is considered that this omission is unlikely to affect the results and conclusion of the EclA.*
127. Designated sites – *with regards to designated sites, there are no Sites of Special Scientific Interest (SSSIs) located in proximity to the site, nor is the site covered by any SSSI Impact Risk Zones. It is identified that one Local Wildlife Site (LWS), the Shire Dyke, Balderton South LWS 5/220, would be partially affected by the proposals, involving 580 metres of the western spur being lost to the development. However, this section of the LWS was found to be largely dry and did not contain LWS qualifying features, and the loss will be compensated through the enhancement of another section of dry non-L WS ditch (600 metres long) situated nearby, which is an approach which is considered to be acceptable.*
128. *Regarding indirect impacts, the water environment assessment has concluded that there are no significant effects on surface groundwater or groundwater receptors during the operational and restoration phases of the proposed development. Additional mitigation measures are not required beyond those already built into the scheme, and the EclA has concluded that the proposed extension will not have an impact on the hydrological conditions of Shire Dyke LWS.*
129. *A further LWS, Cowtham House Arable LWS 5/221 is adjacent to the application site and would not be directly affected, with the implementation of*

dust control measures. Several other LWSs lie within 2km of the application site; however, no impact pathways have been identified.

130. Habitat – in terms of habitat, the site is dominated by arable grassland, with small strips of improved and semi-improved grassland, bounded by species-poor hedgerows (with hedgerow trees) and wet and dry ditches. In addition, there are small areas of woodland (0.1 ha) and scrub is also present, together with a single pond.
131. A total of 4.6km of species-poor hedgerow habitat will be progressively lost, with 2.9km of species-rich habitat replaced post-restoration. Given the net loss of hedgerow habitat, it should be ensured that retained (and created) hedgerows are subject to enhanced management, whereby the intensity of management is reduced. This approach should be added to the mitigation measures to be employed at the site.
132. With regards to bats, seven trees were deemed to have moderate potential to support roosting bats; however, following surveys, no bat roosts were identified. During bat transect and passive monitoring surveys, generally low levels of activity from common and widespread species was found.
133. With regards to birds, a total of 33 species were recorded breeding on the application site, of which 6 are Red Listed and 4 Amber Listed. With the exception of cuckoo, these are all generally widespread (albeit declining) species. There will be the unavoidable loss of habitat and displacement of some species from the application site during working.
134. Amphibian and reptile surveys of the pond were negative for Great Crested Newts, whilst grass snakes are known to be present to the north of the application site (within 1km). The majority of the application site is considered to be unsuitable for reptiles; however, small patches of suitable habitat (for example, along the Shire Dyke) provide suitable habitat, and a precautionary approach is proposed during site clearance.
135. With regards to other species, brown hare was recorded in the survey area in low numbers. Hedgehog and otter were scoped out of further survey work. No habitats suitable for specialist invertebrates were identified on site, although Grizzled Skipper butterflies are known to be present within the vicinity.
136. Regarding water vole, it is noted that the EA holds records of this species evident in the Shire Dyke in 2016. However, surveys found no evidence on the application site. Nevertheless, given the EA comments, it is recommended that pre-commencement surveys are completed. This approach should be added to the mitigation measures to be employed at the site.
137. Impact assessment and mitigation – with regards to impact assessment and mitigation, there is agreement with the conclusions reached in the impact assessment section of the EclA. As well as the mitigation measures mentioned above, the mitigation measures listed in section 5.2 of the EclA should be

secured, for example through inclusion in a CEMP or similar document, to be submitted for approval prior to commencement, via a condition.

138. Restoration – the proposed restoration scheme (including the consequential amendments to the northern part of the quarry) are supported and would deliver a significant increase in semi-natural habitat at the site. In particular, the extensive seasonally wet pools and scrapes to the west of the new southern lake are supported. Regarding the lake, it is requested that the margins be designed to have a more irregular margin, and it is queried whether anything can be done to reduce the size of this feature, or enlarge the area of marginal wetland habitat.
139. The submission of a detailed restoration scheme, including details of phasing and advance habitat creation (wherever possible), species mixes, establishment methods, and maintenance regimes should be secured through a condition. This should give consideration to the point raised above regarding the lake size and margins.
140. A 15 year after-care period is proposed for wetland habitats, matching what is in place on the northern part of the site.
141. Reg. 25 response (First)
142. The 'Ecological Issues' document dated 16<sup>th</sup> June 2021, submitted as part of the applicant's Regulation 25 response, seeks to address comments and concerns raised by NWT and the EA. The details contained therein all look reasonable (noting that the original submission was considered satisfactory) and as such, there are no further comments at this stage.
143. Reg. 25 response (Second)
144. It is noted that the Biodiversity Net Gain (BNG) calculation has been carried out properly, whilst recognising constraints concerning the retrospective application to Bantymock North, including in relation to linear habitats.
145. It is understood that the BNG calculation was carried out to allow the two restoration schemes to be compared (i.e. the original approved restoration scheme vs the scheme proposed through this planning application). This has demonstrated that that biodiversity net gain above the (yet to be mandatory) 10% figure can be achieved, and that the new scheme is an improvement over the previous scheme in terms of BNG.
146. However, it is again queried whether in undertaking the BNG calculation, gains for biodiversity have been maximised as per MLP policy, given that the target condition for habitats has not been set above moderate (which keeps the aftercare period to 15 years). The Regulation 25 letter invited the applicant to demonstrate how biodiversity net gains were maximised, but no such information has been provided.
147. It is also queried whether this BNG assessment is indeed for the 'feasibility stage', as asserted in the further Regulation 25 response. Therefore, the

*submission of further BNG assessment, reflecting the final restoration proposals, should be made a pre-commencement condition of any permission granted, along with the production of a BNG Management and Monitoring Plan as proposed.*

148. *Finally, an Initial Habitat Creation and Enhancement Method Statement has been submitted. It is noted that the details contained therein are supported and as recommended would need to be incorporated into an updated Restoration Management Plan (as submitted for Bantycok North), the submission of which should be secured through a condition.*
149. **Nottinghamshire Wildlife Trust (NWT) Objection.**
150. *Surveys to the northern part of the proposed southern extension area should be undertaken to ensure there is complete data on protected species. In general, the correct suite of surveys has been undertaken to appropriate methodologies and has been fairly interpreted.*
151. *It is noted that the applicant has undertaken a suite of ecological surveys and has sought to address the issues previously raised on the northern site, such as the need for the comparative figures for types of habitat lost and gained between the current and proposed schemes.*
152. *It is advised that the objection is capable of being overcome if the applicant adopts the following practical and reasonable further habitat measures outlined below:*
153. *The section of the Shire Dyke, Balderton South LWS that would be lost is not adequately compensated for given that the value of the LWS is of County importance. The proposed compensatory habitat does not constitute a 10% Biodiversity Net Gain for the habitat that would be lost.*
154. *It is recommended that a multi-channel ditch be created, twice the length of the section being lost; and that these works should be undertaken well in advance of the loss of the existing LWS ditch.*
155. *Regarding the establishment of the marginal habitat, a time limit should be set, for example 3 years, to assess colonisation success and for action to be taken accordingly.*
156. *The proposed mitigation measures (a 23m buffer in between the topsoil bund and LWS; and dust mitigation) would reduce adverse impacts on the arable weeds the Cowtham House Arable LWS is designated for, but there must be a monitoring commitment to survey for rare arable plants annually and to take action if they are impacted.*
157. *BAP/SN 41 Principal Habitats - the site stripping works would result in the loss, severance and damage to hedgerow habitat and trees, including 4.6km of species-poor hedgerow habitat, which would constitute a substantial adverse impact that cannot be compensated in less than 10 years.*

158. *There may also be dust and air pollution that could damage the hedgerow plants and/or species composition.*
159. *Only 2.9km of species-rich hedgerow habitat would be planted, resulting in a permanent adverse direct and indirect impact which would be significant at the local level for a period of 15 years (the consultant's assessment).*
160. *This loss of hedgerow habitat would have a substantial impact on biodiversity, not least through the loss of feeding and breeding habitats for red list farmland birds, which it is considered has been underestimated in this assessment, as has the impact on birds and bats from the substantive loss of many mature hedgerow trees.*
161. *No mitigation for this impact from the loss of mature trees has been proposed, and reliance on new hedgerow planting in 15 years' time is not considered adequate mitigation. A commitment should be made to placing all retained hedgerows into a conservation management regime to allow them to grow higher and broader to accommodate more feeding and breeding birds from the earliest opportunity.*
162. *Areas of the site should be identified where tree and shrub planting can be undertaken in advance of the loss of the hedges and trees, to provide some displacement habitat for red list birds.*
163. *Grassland field margins would be lost, equating to at least 2.7 ha of grassland habitat, of importance for red list farmland birds, herptiles, invertebrates and foraging bats. An equivalent area of mitigation habitat should be created in advance of the loss of these features, to provide displacement habitat, in the form of blocks or strips of species-rich grassland in areas of the site that would not be worked, and also seeding of long-term storage mounds with a species-rich grassland mix that would develop the diversity of seeds and insects required by many red list farmland birds.*
164. *Whilst it is noted that hedgerows with a greater range of species are proposed in the restoration scheme, these would form little ecological function for at least 15 years and so cannot be considered as mitigation.*
165. *Impacts on herptiles species (smooth newt, common frog and common toad) from the loss of habitats, such as ditches and grassland field margins, should be mitigated through species-rich grassland, ditch enhancement and pond creation in advance of any new working footprint. The phasing and restoration scheme as currently proposed does not include sufficient mitigation habitat from the earliest stage when species would be displaced.*
166. *Bird nesting habitats would be lost with no meaningful mitigation for many years, further mitigation during the operational period should be provided.*
167. *Birds - the loss of hedgerow and field margins together with noise, blasting and disturbance from operations would directly impact scarce birds. No mitigation*



*appears to be offered for this noise impact, despite the presence of red list species, such as yellowhammer, skylark and linnet which rely on these habitats.*

168. *Measures would partially mitigate this habitat impact – notably the creation of scrub and grassland habitats at the earliest possible stage, but this would not help species such as skylarks that rely on grassland habitats. This should be mitigated by the early creation of grassland habitat and by optimising the use of long-term storage mounds for seed and insect rich grassland habitats. The applicant should commit to this and provide a plan of these features and a timetable for their establishment.*
169. *Bats - a number of bat species were recorded as using the site, including Nathusius pipistrelle. Adequate surveys have demonstrated that no roosts are present on the site, however the hedges and ditches are clearly important as foraging corridors for bats. The loss of these features in a landscape can have a serious effect on the viability of bat populations and all attempts should be made to mitigate those impacts. Proposed measures would also be beneficial for bats, i.e. establishment, in advance of habitat loss, of woodland copses, species-rich grassland habitats, ponds and wet ditches, so these should be undertaken by the applicant.*
170. *Water voles have been monitored annually on the current site and are no longer present. This is an issue that should have been addressed as part of the annual monitoring and review process. As part of the proposal, a commitment should be made to enhance the habitats and to tackle mink, in order to try to bring them back, as this is a failure of the current quarrying scheme.*
171. *The phased working and restoration proposed should enable continued use of the site by brown hare, but a commitment should be made to additional mitigation measures to reduce the likely impacts on hedgehog.*
172. *Paragraph 5.2.1 describes a number of generic mitigation measures which are supported and which should be secured by condition.*
173. *In terms of restoration, the restoration scheme should create large areas of priority BAP/Sn 41 habitat, and in order to do so, this scheme should:*
  - (a) *Detail the proposed habitats in terms of the rationale behind their choice, their intended composition and the target habitat (preferably using the National Vegetation Classification as a descriptive tool).*
  - (b) *Describe the methods of hydrological restoration, substrate preparation, plant establishment, plant type and form, provenance of material, establishment maintenance and long-term after-care.*
  - (c) *Provide assurance of the long-term funding for management of the habitats, so that they can be retained in perpetuity i.e. the aftercare period should be at least 20 years.*
174. *A 20 year extended aftercare commitment rather than the proposed 15 years is expected, to ensure the proper establishment and beneficial management of*

*habitats claiming to have a high biodiversity value, such as woodland, species-rich grasslands and wetlands.*

175. *The further enhancement measures to increase biodiversity are supported, such as the provision of reptile hibernacula in areas of grassland, nest boxes in the northern woodland belt once established and log piles for invertebrates, but advises these are secured by condition with a clear plan and timetable against which progress can be monitored.*
176. *The proposed restoration scheme still contains large areas of land described as 'agriculture', and so it is essential that those areas that are to be restored to biodiversity habitats are of the highest quality and likely to achieve beneficial outcomes for wildlife.*
177. *Mineral site restoration should be a significant delivery mechanism to help achieve BAP priority/SN41 habitat targets in Nottinghamshire, the importance and necessity of which is recognised in both the current and emerging MLPs. In the face of ecological and climate emergencies, mineral schemes should play their part in delivering Nature Recovery Networks (NRN) and are uniquely placed to do so.*
178. *It is noted that there now appears to be a slightly higher ratio of priority habitats to arable land in the latest proposed scheme, which is supported. However, the large lake would be of very limited ecological interest as currently proposed, it should be broken into smaller areas with peninsulas and islands, and considerably more sinuous edges. The smaller lake also should have a much greater proportion of sinuous edge.*
179. *It is noted that there is now an improved area of shallow wetland habitats (marsh, ephemeral pools, reedbeds) around both lakes, through creative use of the available material.*
180. *There is concern that the comparative figures show a reduction in the area of wet grassland between the approved and proposed restoration schemes, given that this is one of the scarcest habitats in the county and hence a very high priority for restoration where it can be delivered with the correct topography. Further efforts should be made to secure more wet grassland.*
181. *The proposed woodland areas have some useful connecting corridors and are generally less fragmented than in the earlier version of the plan, which is to be welcomed.*
182. *The new ditches do not need to follow straight lines through habitat areas and could be more sinuous and, in places, multi-channelled to improve the diversity of wetland habitat niches.*
183. Reg. 25 Response
184. Surveys and EclA *The survey limitations are identified by the consultants themselves with regard to the northern part of the proposed extension area, and it is therefore disappointing that despite an entire survey season passing, this*

work has not been done. The applicant's ecologist has stated that they consider it would not make a significant difference to the EclA, but this cannot be known if the surveys have not been carried out. The habitats that have not been surveyed are young woodland plantations and grassland, with potential for species such as reptiles. In the absence of any survey data it must be assumed that reptiles and red list BoCC will be present and mitigation will have to be designed accordingly, but this is poor practice, as species, particularly protected species can turn up unexpectedly.

185. *Shire Dyke, Balderton South LWS - a section of this LWS would be lost as a direct impact of the operational activities. The consultants state that this section does not contain LWS designating attributes; it is a dry section of the ditch containing terrestrial plants. It is an established principle of the LWS system, however, that LWS's still retain their value if it is ecologically feasible to restore them (i.e. they have not been physically lost), which would be the case here, through re-wetting.*
186. *Therefore, the value of the LWS that would be lost is of County importance and any compensation proposed should reflect that. The consultant has agreed that this would be an adverse direct impact, significant at the County Level for a period of at least 10 years. However, the proposal to enhance an existing section of dry ditch nearby, which is 600m long and only 20m longer than the section that would be lost due to quarrying works, does not represent adequate ecological compensation, as this would not even constitute 10% Biodiversity Net Gain for the habitat that would be lost.*
187. *It is expected that a multi-channel ditch/small watercourses be created, of at least twice the length that would be lost, preferably with a sinuous shape and variable profile, that could develop as an important habitat if the water regime could be properly managed. Given the length of working period for this site, it is essential that these works are undertaken early, well in advance of the loss of the current LWS ditch.*
188. *It appears that the applicant may be creating an additional 250m of ditch which is an improvement, but the wording is somewhat ambiguous and for the avoidance of doubt, the applicant should clarify exactly what is being proposed and put it on a plan, so it can be determined whether this is adequate compensation for the loss of 580m of LWS.*
189. *As the BNG calculator does not cover the loss or gain of ditches this needs to be shown clearly in another form. The claims for enhancement of the 600m section of existing ditches should include cross-sections and full details of design, habitat interventions and monitoring. It is noted that the consultants have now said this will be developed, but it needs to be available in order to inform the County Council's determination as to whether it is adequate or not.*
190. *The applicant has stated that the ditch to be enhanced would be re-profiled and de-silted where necessary for conservation purposes to achieve the desired profile to allow for areas of permanent water and shelves for marginal habitat, which can be left to colonise naturally and be monitored periodically. If*

*establishment proves to be of limited success, the applicant proposes to translocate vegetation, including individual specimens from nearby ditches, as directed by the ecologist. This vague undertaking is not sufficient; a time limit should be set, for example 3 years, to assess colonisation success and to enable remedial action; no detail has been provided. This information should be available to inform the County Council's determination.*

191. *Cowtham House Arable LWS – this LWS would not be directly affected by the development and no direct loss of habitat is anticipated. The consultant has concluded that the buffer of 23m in between the topsoil bund and LWS, combined with dust mitigation measures, would reduce the likelihood of adverse impacts on the arable weeds the LWS is designated for. This is considered satisfactory and a monitoring commitment to survey for rare arable plants annually and to take appropriate action if they are impacted is welcomed; so this matter is now resolved.*
192. BAP/Sn 41 Principal Habitats *The site stripping works would result in the loss, severance and damage to hedgerow habitat and trees, including 4.6km of species-poor hedgerow habitat, which is a substantial adverse impact that cannot be compensated in less than 10 years. There may also be dust and air pollution that could damage the hedgerow plants and/or species composition by the chemical effects of dust landing directly on the plant surface or within the soil which would change the soil chemistry.*
193. *Only 2.9km of species-rich hedgerow habitat would be planted, resulting in a permanent adverse direct and indirect impact which would be significant at the Local level for a period of 15 years (in terms of the consultant's own assessment). This loss of hedgerow habitat would have a substantial impact on biodiversity, not least through the loss of feeding and breeding habitats for red list farmland birds, which it is considered has been underestimated in this assessment. It is also considered that the impact on birds and bats from the substantive loss of many mature hedgerow trees has been underestimated.*
194. *No mitigation for this impact from the loss of mature trees was previously proposed in the report, and relying on new hedgerows being planted in 15 years' time is not an adequate form of mitigation. The applicant should therefore commit to all retained hedgerows being put into a conservation management regime to allow them to grow higher and broader so that they can accommodate more feeding and breeding birds from the earliest opportunity. The applicant has now said that they will 'recommend' to the tenant farmer to do this, which is to be welcomed, but it is essential that this is conditioned and enforced, as it has no value if only recommended and not actioned.*
195. *The applicant should identify areas of the site where tree and shrub planting can be undertaken in advance of the loss of hedges and trees, to provide some displacement habitat for red list birds that will lose foraging and breeding habitat. It would be some years before these copses provide any meaningful habitat, but this, in conjunction with the phased loss of trees and hedges, would provide some moderate mitigation. The applicant has now confirmed that 4.6ha of*

*native woodland would be established in advance of working, which is to be welcomed and addresses some of the above concerns.*

196. *The loss of hedgerows would also result in the loss of adjacent grassland field margins. The consultant has now stated that there are minimal margins due to the intensive farming practices on the site, but the fact that species associated with field marked margins, such as grey partridge, are present on site demonstrates that such habitat is there, and so the request remains. Mitigation habitat should be created in advance of the loss of these features, to provide displacement habitat. 7.6ha of wildflower meadow would be established in advance of working, which is to be welcomed.*

197. *It is noted that hedgerows with a greater range of species are proposed in the restoration scheme, which is to be welcomed, but these would form limited ecological function for at least 15 years and so cannot be considered as mitigation.*

#### *Species*

198. Herptiles *it is noted that the reptile and amphibian precautionary approach in the herptile method statement should prevent direct killing of herptiles during operations such as soil stripping. Smooth newt, common frog and common toad are present on the site and so must be using the ditches, grassland field margins for breeding and feeding. There would be impacts on these species from habitat loss, which should be mitigated through species-rich grassland and ditch enhancement and pond creation in advance of any new working footprint. It is to be welcomed that the applicant is now committing to establishing species rich grassland and woodland in advance of working which will help to mitigate this, but there still remains a need to create new ponds and ditches before the existing ditches are lost.*

199. Birds *the loss of hedgerow and field margins would directly impact scarce birds and indeed this is recognised as a permanent adverse impact by the applicant. There would also be an impact on birds from the noise, blasting and disturbance of the operations, likely to result in reduced breeding success. It is noted that no mitigation appears to be offered for this noise impact, despite the presence of red list BoCC, such as yellowhammer, skylark and linnet which rely on these habitats.*

200. *Some of the measures mentioned above would partially mitigate this impact – notably the creation of scrub and grassland habitats outside the working area at the earliest stage would benefit yellowhammer and linnet. The applicant has mentioned the creation of ‘bird thickets’, which would be beneficial for those species that rely on hedgerows, but this would not help species such as skylarks that rely on grassland habitats, this should be mitigated by the early creation of grassland habitat as detailed above, and by optimising the use of long-term storage mounds for seed and insect-rich grassland habitats. The applicant should commit to this and provide a plan of these features and a timetable for their establishment.*

201. Bats a number of bat species were recorded as using the site, including *Nathusius pipstrelle*, a rare bat that has recently colonised the County in relatively small numbers and also recorded were Whiskered bats, which is not common and widespread in the County as is implied by the text. Adequate surveys have been undertaken to locate roosts and that they do not appear to be present, however the hedges and ditches are important as foraging corridors for bats. The loss of these features in a landscape can have a serious effect on the viability of bat populations and all attempts should be made to mitigate those impacts. Some of those measures described already above would also be beneficial for bats, i.e. establishment, in advance of habitat loss, of woodland copses, species-rich grassland habitats, ponds and wet ditches, so these should be undertaken by the applicant.
202. Other mammals water voles have been monitored annually on the current site and are no longer present. This is an issue that should have been addressed as part of the annual monitoring and review process and all efforts should have been made to enhance the habitats and to tackle mink, in order to try to bring them back. A commitment to this should be made as part of this proposal, as this is a failure of the current quarrying scheme. The reasons for this failure have still not been addressed in the applicant's response.
203. Restoration as stated previously, the restoration scheme should create large areas of priority BAP/Sn 41 habitat, as detailed in the Allocation Brief in the MLP, and in order to do this the scheme should:
- Detail the proposed habitats in terms of the rationale behind their choice, their intended composition and the target habitat (preferably using the National Vegetation Classification as a descriptive tool).
  - Describe the methods of hydrological restoration, substrate preparation, plant establishment, plant type and form, provenance of material, establishment maintenance and long-term after-care.
  - Provide assurances of the long-term funding for management of the habitats, so that they can be retained in perpetuity.
204. None of the above detail (apart from a few basic species mixes) have yet been provided, a point that is made strongly in the BNG Report, which states that there is insufficient detail from which to assess likely habitat outcomes.
205. The applicant is still proposing a 15 year aftercare commitment, despite their own BNG Report noting that some habitats, such as woodland, will not reach condition in that time. As previously stated, 15 years is not long enough to ensure the proper establishment and beneficial management of habitats claimed to have a high biodiversity value, such as woodland, species-rich grasslands and wetlands. As previously stated, the Government guidance regarding biodiversity net gain states that 30 years is considered to be a normal period of necessary aftercare and conservation management in order for this benefit to be claimed. It is not reasonable for the applicant to claim the benefit

of BNG for the scheme, but not commit to the same level of aftercare as all other developers would be expected to do i.e. 30 years.

206. *BNG Metric 3.0 has been used to calculate the difference between the approved restoration and the proposed one, which is a useful approach. The BNG Report, however, states a substantive number of caveats on how they interpreted the data and transposed the target restoration habitats into categories to fit the Metric, and clearly state that the results should be 'approached with caution'. NWT agree with this conclusion, that the results are not as clear cut as they appear, not least because it believes that there are errors in the calculations as follows:*

*-the original and revised restoration proposals both use the same baseline figure for habitats totalling 362.2ha. i.e. they use the extension area in the total. However, the figures for 'created habitats' have different totals, i.e. they have not used the extension area figure for the 'original' calculation.*

*-the applicant has not entered figures for the losses and gains of either hedgerows or ditches in the calculator, despite there being the facility to do so in Metric 3.0. This therefore downplays the value of the loss of over 4km of hedgerow and several lengths of ditch.*

*-these discrepancies lead both to a different figure for claimed benefits of the revised over the original scheme, and also underplays the impacts of the scheme overall on linear features. This needs to be checked and resubmitted as it affects the BNG claims made.*

*-It should be noted that BNG should only be used after the mitigation hierarchy has been applied, and that the Metric does not reflect the impacts in fauna, and so these must continue to be considered separately.*

207. *The proposed restoration scheme still contains large areas of land that are described as 'agriculture', and there is reference to the need to maintain a viable landholding for the tenant, so it can be assumed that this means 'arable'. It is essential therefore that those areas that are to be restored to biodiversity habitats are of the highest quality and likely to achieve beneficial outcomes for wildlife.*

208. *Mineral site restoration should be a significant delivery mechanism to help achieve BAP priority/SN41 habitat targets in Nottinghamshire, the importance and necessity of which is recognised in the current and emerging MLPs. In the face of ecological and climate emergencies, the Government has stated clearly that Nature Recovery Networks should be delivered across the UK. Mineral schemes should play their part in delivering those NRN, and are uniquely placed to do so.*

209. *It is noted that there now appears to be a slightly higher ratio of priority habitats to arable land in the latest proposed scheme, which is to be welcomed. In the previous comments, it was stated that the large lake should be broken into smaller areas with peninsulas and islands, and considerably more sinuous*

edges, and the smaller lake also should have a much greater proportion of sinuous edge. It is noted that the applicant has stated that they have now committed to a more varied lake form, with more shallows and sinuous margins, but a plan should be provided to show this commitment.

210. *There is concern that there would be a reduction in the area of wet grassland between the approved and proposed restoration schemes, given that this is one of the scarcest habitats in the county and hence a very high priority for restoration where it can be delivered with the correct topography. The BNG Report supports the view that there is low certainty over the ability to establish wet grassland on the basis of the information provided, therefore further efforts should be made to secure more wet grassland through topographical changes which can be designed into the scheme at this stage.*
211. *The consultant's position is not accepted that this is not possible over such a large site. The area of proposed arable land which is still very large, should be reduced in low lying areas to increase the area of wet grassland, which can still be managed for farming purposes through extensive grazing.*
212. *It was previously stated that the new ditches do not need to follow straight lines through habitat areas and could be more sinuous and, in places, multi-channelled to improve the diversity of wet habitat niches. This does not appear to have been addressed.*
213. *On the basis of the above issues which are still outstanding, NWT object to this scheme as currently submitted, but this objection can be overcome if the applicant adopts the practical and reasonable habitat measures described above.*
214. **NCC (Archaeology)** *No objection subject to planning condition.*
215. *An objection was originally made over a lack of sufficient information. Further consideration was required regarding the standalone farmsteads, particularly Balderton Grange, as proposed extraction moves southwards; and also, an adequate archaeological management plan.*
216. *It is noted that there had been a lack of consideration in the desk-based assessment of the potential of the standalone farm properties, and in particular Balderton Grange. It was highlighted that isolated properties which appear on Sanderson's map of 1835 and which are beyond the limits of the traditional open field system are often much earlier than is assumed and the 'Grange' name and the site's location towards the edge of the parish may indicate this is a monastic Grange.*
217. *There will undoubtedly be archaeology in the proposal site of the sort that has been recorded in the existing quarry, which has been exemplary in undertaking landscape scale recording of the Iron Age and Roman features and has picked up hints of earlier activity as well. However, this site is just beyond the airfield, so archaeology will potentially be better preserved than in the existing quarry. Geophysical investigation works patchily on this very mixed geology, and*



*without geophysical results there is a lack of obvious targets for trial trenching. Trial trenching has shown itself to provide mixed results when it has been tried in this area.*

218. *Therefore, further information was sought regarding mitigating the archaeological implications of the development, in the form of an archaeological management plan. It was advised that the plan should be risk-based, capable of dealing with unexpectedly significant discoveries, and able to identify the measures required for each phase of the extraction process. It should also outline recording and reporting practices, which would need to be detailed in individual phase written schemes of investigation (WSIs).*
219. *It was advised that the management plan should be in place prior to determining the application, whilst individual phase WSIs could be agreed and submitted, for each phase of working.*
220. Reg. 25 response (First)
221. *An objection has been made regarding the supplementary information. Whilst the submitted Archaeological Management Plan broadly meets the targets described in the initial consultation response there are a number of outstanding issues which should be addressed, possibly by way of an addendum.*
222. *Firstly, the WSI's for each phase of work should reference appropriate parts of the regional research framework given that the site has a significant potential to feed directly into the aims and objectives of the framework, and appropriate references would help focus targets and resources.*
223. *Secondly, there is no reference to consideration of a programme of radiocarbon dating and this should be addressed, as the site has high potential for both earlier prehistoric and late Roman/early Mediaeval activity which may not be visible through other methods of dating. In particular, it is recommended that C14 dating of human remains takes place as a matter of course, but to finesse these dates other materials would also need to be sampled.*
224. *Thirdly, concern is raised in relation to the proposals to produce a final report only on completion of archaeological work on the entire site, and it is advised that this aspect is reconsidered. As there are concerns regarding reporting on the existing site, which are hopefully now being addressed, it is recommended that for the proposed extension it would be better to agree a set of triggers for reporting, such as groups of phases of stripping, or individual set piece archaeological excavations; and, also, monitoring of the progress of this, would also need to be agreed.*
225. *The management plan notes that geophysical survey is effective for the site, but attention is drawn to the fact that this is not completely correct. In parts of the site, geophysical investigation has been very misleading, and it cannot be relied on as the main strategy for focusing archaeological fieldwork. It is probably most useful for the areas of the site which were suitable for Iron Age and*

*Roman settlement activity, but not for the earlier prehistoric features or for the landscape scale field systems which make this area of particular significance.*

226. *Finally, there is likely to be limited opportunity for successful preservation in situ and if remains are uncovered which are of national importance, their treatment would need to be commensurate with their significance to ensure an appropriate level of recording and investigation; acknowledgement of this would be useful.*
227. **NCC (Built Heritage)** *No objection.*
228. *Originally there was an objection due to impacts relating to Balderton Grange which it is recommended should be considered for its archaeological potential in accordance with the advice provided by the County Council's Archaeologist.*
229. *Consideration has been given to the cultural heritage information and the landscape and visual impact assessment and the following comments have been made from the built heritage conservation perspective.*
230. *Paragraph 189 of the NPPF requires applicants to provide suitable information to determine the impact of proposals on heritage assets, including those of the built environment. It is noted that the information accompanying the application is adequate for the requirements of the NPPF with regards to describing and assessing impacts on the designated built heritage assets within the visual impact of the proposals.*
231. *Regarding the impacts on the setting of the designated built heritage assets, conservation areas and listed buildings, it is confirmed that the proposed quarrying and restoration will cause no substantial harm during the operational period or thereafter. It is confirmed that the LVIA demonstrates that the quarrying will cause only less than substantial harm to the setting of the listed buildings within the ZTV. The proposals are therefore compliant with the requirements of the NPPF paragraph 196 and the low level of harm weighed against the public benefits of the proposals.*
232. *Regarding non-designated heritage assets, the proposals affect two farmsteads identified on the HER as historic, one of those is named 'Balderton Grange' on pre-Victorian maps and has the potential to be of considerable heritage interest with likely monastic connections. It is noted that the advice of the County Council's Archaeologist has considered this and would draw the applicant's attention to that. The proposals do not require the removal/demolition of either Balderton Grange or Cowtham Cottage (another non-designated heritage asset), however, the quarrying comes close to both and will impact on the setting of these heritage assets. Under these circumstances, the correct paragraphs of the NPPF are 197 and 199 that directs the Local Planning Authority (LPA) to weigh the harm to the significance of a non-designated heritage asset and provide for a balanced judgement, as well as ensuring that the understanding of the significance is recorded appropriately. Accordingly, it is recommended that the archaeological potential for the Balderton Grange site is considered in accordance with the advice provided by the County Council's archaeologist. An historic impact survey was requested.*

233. Reg. 25 response (First)

234. *Having reviewed the HIA report from PCAS of July 2021, which formed part of the Regulation 25 Submission, the following comments were made from the built heritage perspective.*

235. *The HIA has gone some considerable distance in examining and describing the heritage interest of the non-designated heritage buildings identified as impacted upon by the proposed mining activity. However, the level of information provided is not yet adequate for the purposes of the NPPF paragraph 194 from the viewpoint of determining the potential heritage significance of Balderton Grange and Cowtham House. It is clear that the former site (falling as it does within the application redline area) is most impacted upon by the mining operation and longer-term changes to the wider rural setting of the farmstead. It is therefore recommended that the PCAS report is supplemented with a detailed building recording exercise of all pre-C20th of the buildings at both sites (including any pre-C20th material incorporated into post C20th buildings, if present).*

236. *The impacts on the setting of both sites is properly and accurately articulated in the PCAS report and the level of harm would be 'less than substantial', as such, in light of the non-designated status of the two sites and the level of harm (in accordance with paragraph 203 of the NPPF) no objection would be raised to the proposed mining activity, on condition of the detailed recording of the buildings as mentioned above (to level 3 of the HE Understanding Historic Buildings 2006).*

*The level of information provided is not yet adequate for the purposes of the NPPF paragraph 194 from the viewpoint of determining the potential heritage significance of Balderton Grange and Cowtham House. It is clear that the former site (falling as it does within the application red line area) is most impacted on by the mining operation and longer-term changes to the wider rural setting of the farmstead. It is therefore recommended that the PCAS report is supplemented with a detailed building recording exercise of all pre-C20th buildings at both sites (including any pre-C20th material incorporated into post C20th buildings, if present). This should be carried out to level 3 of the HE Understanding Historic Buildings 2006. No objection subject to a detailed recording of the buildings.*

237. Reg. 25 Response (Second)

238. *Regarding the request for further information in relation to the historic farm buildings in the vicinity of the proposed quarrying, it is extremely disappointing to see the response provided by the applicant.*

239. *To read experts denying the value of thorough investigation of historic building fabric as the fundamental component of developing a properly informed appreciation of the heritage significance of the asset is 'painful'. Clearly the sites in question are both non-designated heritage assets, and as such it is recognised that the approach must be proportionate. However, the original*

*information has not conclusively established the age of the fabric, which, based on cartographic (and other) evidence, might be of considerable age.*

240. *The age and rarity of historic buildings directly influences their significance and in turn that must influence how the extent and sensitivity of the setting of that asset is considered. There is disagreement with the position taken by the applicant, which is that a detailed building recording is only required as mitigation for direct impacts. The impact of the proposals is restricted to less than significant harm to the setting of a non-designated heritage asset and paragraph 203 of the NPPF is the appropriate one to apply:*

*'The effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset'.*

241. *It is advised that the 'scale of any harm' is likely to be 'less than substantial', even if the fabric of either building was determined to be of greater age than the applicant has indicated. Whilst further information would have been welcomed to determine the age of the buildings with more certainty, it is noted that the additional information being sought would be unlikely to influence the result of the weighing up.*
242. **Via (Landscape)** *No objection subject to planning conditions regarding the management and after-care programme for the site, including a management and maintenance plan for the ecological habitats created, and details of long-term management of these areas to increase their biodiversity in line with the targets in the Biodiversity Action Plan (BAP); and finally, a detailed landscape proposals drawing including schedules covering species, size and density planting.*
243. *The detailed planting proposals should refer to the proposed species mix for the South Nottinghamshire Farmlands landscape character, however the use of ash should be avoided at the present time due to the prevalence of disease.*
244. *The management and after-care programme for the site as referenced in the supporting information should be developed to include a management and maintenance plan for the ecological habitats created. This should be included as a condition of the application and should include proposals for the long-term management of these areas to increase their biodiversity in line with the targets in the Biodiversity Action Plan (BAP).*
245. *There should also be treatment of the existing bunding across the entirety of the scheme.*
246. *Attention is drawn to the fact that in the scoping opinion which is included in the planning statement at appendix 1 the MPA requested that the management and visual assessment incorporated a comprehensive review of overburden*

management across the entirety of the Bantymock Quarry with an emphasis to reduce the visual effect of the existing overburden mounds which are stored within the south-western corner of the site.

247. *The applicant's response to the above is noted. The Landscape and Visual Impact Assessment (LVIA) indicates that this mound will remain at the southern edge of the existing site but to ameliorate the identified issue above, the mounds will be regraded to reduce their conspicuous and prominent appearance, and also seeded to further reduce their prominence.*
248. *It is confirmed that the LVIA has been carried out to the accepted best practice, guidance and methodology. In terms of the EIA regulations effects which are 'major/moderate' or 'major' are considered to be a 'significant effect' for the purposes of the assessment.*
249. *Impact of the proposals on the existing landscape character – the LVIA has referred to the National, Regional and County Landscape Character Assessments as requested. The site is close to the border with Lincolnshire and therefore the South Kesteven Landscape Character Assessment has also been referred to.*
250. *The value, susceptibility and sensitivity of the site and the surrounding study area is summarised in Table 2 of the LVIA. The sensitivity of the South Nottinghamshire Farmlands Landscape Character Area is assessed as low, and of the South Kesteven Trent and Belvoir Vales Landscape Character Area as low/medium. The overall sensitivity of the site is assessed as low (low value and low susceptibility to change). This is agreed by the County Council's Landscape Consultant and accords with the NSDC Landscape character assessment of the area which records low sensitivity.*
251. *Landscape effects during the extraction stage and post restoration are set out in Table 3 of the LVIA. The scale of landscape effects on South Nottinghamshire Farmlands LCA is a minor/moderate adverse, and on the South Kesteven Trent and Belvoir Vales Landscape Character Area is minor adverse. On the site itself the scale of landscape effect is assessed as moderate adverse reducing to minor/moderate beneficial by year 15 of the restoration, this is agreed with by the County Council's Landscape Consultant. In EIA terms the development would not give rise to significant residual landscape effects, which is also agreed.*
252. *Treatment of the LWS sites - Reference 5/221 Cowtham House arable – this LWS will not be directly affected by the development and no direct loss of habitat is anticipated. The creation of a topsoil bund on the eastern edge of Cut 15 will act as a buffer to dust produced from the site. There will be a distance of 23m in between the topsoil bund and the LWS. This combined with dust mitigation measures will reduce the likelihood of adverse impacts on the arable weeds that the LWS is designated for.*
253. *Reference 5/220 Shire Dyke, Balderton South – a section of this LWS will be lost as a direct impact of the operational activities. This section does not contain*

*LWS designating attributes; it is a dry section of the ditch containing terrestrial plants. The main section of the dyke runs adjacent to the site boundary.*

254. *To compensate for the loss of this section of the Shire Dyke, it is proposed to enhance an existing section of dry ditch, which is 600m long and 20m longer than the section that will be lost due to quarrying works.*
255. *Currently both sections (i.e. the section to be lost and the section to be enhanced) of the ditch are dry. The new outfall for the southern lake will feed into the ditch to be enhanced, and therefore help it to retain water and provide suitable conditions to develop an aquatic plant community. The ditch to be enhanced lies on the application site boundary and will not be affected by the development, therefore enhancement work will be able to take place at an early stage.*
256. *In summary, it is confirmed that the LVIA of the proposed development is satisfactory and has been carried out to the appropriate methodology and guidance. It is agreed with the assessment that the scale of landscape effects on the South Nottinghamshire Farmlands LCA is minor to moderate adverse; and that the scale of landscape effects on South Kesteven Trent and Belvoir Vales LCA is minor adverse.*
257. *The assessment of the scale of landscape effects on the site during extraction is moderate adverse which is agreed with; and it is both noted and agreed with that 15 years post restoration, the scale of landscape effects on the site would be minor/moderate beneficial.*
258. *There is agreement that the scale of visual effects during the extraction stage would range from no effect to moderate adverse and that the scale of visual effects at year 15 ranges from no effect to moderate/minor beneficial.*
259. *It is accepted that visual impacts would extend by 15 years due to the extension of the period for quarrying, but that none of the impacts identified are significant in terms of the EIA legislation.*
260. *It is noted that an amended agricultural and ecological landscape restoration plan is proposed and attention is drawn to the fact that this should refer to the species list for the South Nottinghamshire Farmlands LCA. Attention is drawn to the fact that the treatment of the two LWS sites affected by the proposed works should be agreed with the County Council's Nature Conservation Manager.*
261. *It is noted that the existing bunds to the southern edge of the existing Bantycok site will be regraded and seeded to reduce their visual prominence, and that 4m screening bunds will be constructed along Grange Lane.*
262. *Should the full application be approved, the following information would be required to be submitted: a detailed landscape proposals drawing should be provided, which includes schedules that show species, size and density*

*planting. In addition, a long-term maintenance and management plan for the ecological habitats created should be provided.*

263. *The proposal is supported subject to the recommended planning conditions.*
264. **Via (Noise Engineer)** *No objection subject to the existing noise and blasting planning conditions associated with planning permission reference 3/18/01723/CMA being carried forward with appropriate amendments to reflect the recommended site noise limit at those identified noise sensitive residential dwellings to the proposed southern extension (extant condition 29); appropriate updates to reference the latest site plan (extant condition 21); and appropriate amendments made to reference the up-to-date SLR monitoring scheme (extant condition 30).*
265. *The predicted noise levels demonstrate that if all operations were to operate simultaneously, at all receptors, the cumulative noise level would be below the specified limits of 10 dB above measured background noise levels, and the absolute limit of 55dB LAeq, 1hour.*
266. *Blasts shall not exceed a maximum Peak Particle Velocity (PPV) of 6mm/s at a 95% confidence limit when measured at the nearest residential property or other type of receiver.*
267. Reg. 25 Response (First)
268. *An objection was raised to the amended Flood Risk Assessment.*
269. *As the noise assessment relies on the presence of the 4metre noise bunds in its noise predictions at nearby Noise Sensitive Receptors (NSRs) it is important to understand the effect of creating gaps in the bunds, as even small gaps in a noise barrier can significantly reduce the effectiveness of the barrier.*
270. *It is recommended that the applicant confirm the precise location of the proposed gap(s) in the noise bund; and the impact of the proposed gap(s) on predicted noise levels at the NSR's*
271. *Should the applicant propose staggering/overlapping the noise bunds, this would need to take into account the grading of the end-slopes to ensure the effective height of screening (4m) in the noise assessment is maintained from the viewpoint of any NSRs. This may require a significant length of overlapping of the noise bunds to achieve this, which may not be practical due to the spatial requirements and overall footprint of the noise bunds.*
272. Reg. 25 Response (Second)
273. *It is acknowledged that the noise impact assessment has been updated as of November 2021 in response to a Regulation 25 request for additional information. Concerns had been highlighted regarding the effect of creating gaps in the bunds to reduce the flood risks and the potential reduction of the effectiveness of the bund acting as a noise barrier.*

*It is noted that the noise assessment is now satisfactory and has considered a range of typical plant and that the predicted noise levels represent the 'worst case' noise prediction. All the noise predictions have been undertaken using computer noise modelling software taking into account the topography.*

*The predicted noise levels demonstrate that if all operations were to operate simultaneously, at all receptors, the cumulative noise level would be below the specified limits of 10dB above measured background levels, and the absolute limit of 55dB LAeq, 1hour.*

*The updated noise impact assessment has concluded that the creation of the gaps for flood alleviation would not have any noise impacts on the NSRs.*

*There is no objection to the proposals subject to the updated noise conditions.*

274. **Via (Countryside Access)** *No objection.*

275. *It is confirmed that there are no recorded Public Rights of Way across the site, as noted on the Definitive Map of recorded Public Rights of Way. However, attention is drawn to the fact that this does not preclude unrecorded public rights being proven to exist at a later date.*

276. *It is acknowledged that the applicant's restoration proposal includes a network of new paths, some of which may improve the path network in this area. However, attention is drawn to Policy A1-13 of Nottinghamshire's Rights of Way Plan which states that Creation agreements will only be considered:*

- (a) where there is a clear public benefit to be gained from the proposed path or*
- (b) where the requirement to dedicate, forms part of an obligation under the Town & Country Planning Act 1990 s106.*

*Maintenance liability will normally only be accepted where:*

- (c) the addition of a path is of strategic public benefit*
- (d) no initial additional expenditure by the Authority is required to bring a path into a fit state for use.*

277. *The applicant must consider the maintenance liability and ongoing costs of any new paths provided and discuss with the Countryside Access team any intention to dedicate new Public Rights of Way at an early stage. The Authority can only accept additional paths to the network when they are judged to be of strategic public benefit.*

278. **United Kingdom Health Security Agency (UKHSA) (formerly Public Health England (PHE))** *No objection.*

279. *It is noted that the emission of dust from quarrying and associated recovery and haulage operations has the potential to cause nuisance and present a health risk from the inhalation of particulate matter. Whilst nuisance can be a source of*



*complaint and distress, the assessment of dust as a potential statutory nuisance is a matter for the local authority and, consequently, the comments will be restricted to respirable dusts (PM10 and smaller). Particulate matter, PM10 (particles less than 10um in diameter) is associated with a range of health effects including effects on respiratory and cardiovascular systems, asthma and mortality.*

280. *It is noted that the applicant proposes mitigation against dust and particulate impacts through a combination of 'stand-off' distances from receptors and the application of existing operational controls and working practices used in the existing operation within the new site. The applicant indicates that the use of 'frisbee' dust monitoring gauges will also be continued if the extension is approved, although it is noted that monthly dust monitoring does not identify relatively short-term dust releases/events.*
281. *Whilst the applicant cites guidance from the Institute of Air Quality Management (IAQM) in screening out the potential for breaches of the short-term Air Quality Standard (AQS) for PM10 where ambient/background PM10 levels are below 17ug/m3, this is based on the relationship between annual mean concentrations and the risk of the 24-hour PM10 AQS being exceeded. The applicant notes the predicted PM10 background concentrations for 2024 below 17ug/m3 (an estimate of 16.9/ m3 from Defra modelling) at the nearby receptor locations and therefore considers that there is little risk of the contribution from the quarry causing an exceedance of the PM10 AQS.*
282. *Reducing public exposure to non-threshold pollutants such as particulate matter below air quality standards has potential public health benefits and approaches are supported which minimise or mitigate public exposure to non-threshold air pollutants, address inequalities (in exposure), and maximise co-benefits (such as physical exercise) and encourage their consideration during development design, environmental and health impact assessment, and development consent.*
283. *It is noted that the applicant proposes that the existing Dust Management Plan (DMP), detailing appropriate dust mitigation measures, will be applied to the new site following planning consent. It is recommended that the planning authority and relevant local authority team ensure that the control measures proposed are reasonable, proportionate and, if necessary, enforceable. It would be expected that any complaints of dust emissions from the site will be recorded appropriately and investigated promptly.*
284. *The regulatory authority ensures that any site activities regulated through the pollution prevention and control regime will operate to Best Available Techniques (BAT) to ensure that emissions are kept to a minimum beyond the site boundary.*
285. Reg. 25 Response

286. *It is noted that further information has been provided regarding the management of air pollution from site operations and guidance is cited regarding the low risk of Air Quality Standards being exceeded.*
287. *The UKHSA's position remains that reducing public exposures to non-threshold pollutants such as particulate matter, below Air Quality Standards has potential public health benefits; that is, ongoing reduction in air pollution remains important even when AQS exceedances are not likely to occur.*
288. *It is noted that further comments have been provided on the need for dust control measures, and that the control measures proposed in the Dust Management Plan remain best practice and would be conditioned by enforceable planning conditions.*
289. *The potential impact on air quality from quarrying operations reflects that ongoing public health benefits continue when there are reductions in air pollution below air quality standards, i.e., that air pollutants are effectively non-threshold. It is noted that although the applicant clarifies that guidance states it is unlikely the quarrying operations will lead to the AQS for PM10 being exceeded, and that quarrying operations will comply with guidance to control particulate and dust emissions, there is no further discussion of PHE's position.*
290. *It is noted that the initial ES did not perform a quantifiable assessment of the impact of quarrying emissions on local residential receptors, although the area has a low population density, several receptors would be closer to the proposed new working area than current operations.*
291. **Western Power Distribution** *No objection.*
292. *There is no identified WPD apparatus that would be affected by the planned works.*
293. **CLH Pipeline System (CLH-PS)** *No objection subject to conditions with regards to ensuring that no work takes place so as to undermine the oil pipeline or undermine any land within 10 metres either side of the pipeline; and to ensure that for blasting operations within 400m of the oil pipeline there is compliance with a maximum PPV of 25mm/s at the nearest section of pipeline to any blast.*
294. *Originally a holding objection was put in place due to impacts from the proposed development relating to the oil pipeline infrastructure, which crosses the application site.*
295. *It is confirmed that CLH-PS's apparatus would be affected by the proposals and that the proposed development is to be constructed within close proximity to this apparatus. Such works would require consent from CLH-PS and, in this instance, consent would not be granted as the proposed development would restrict access to the pipeline, both for routine maintenance and in an emergency situation. There is therefore an objection to the planning application.*
296. Reg. 25 Response

297. *It is confirmed that the objection can be removed provided that paragraph 3.66 of Strategic Policy SP5 of the Nottinghamshire Minerals Local Plan is fully complied with. Under that policy, energy infrastructure is protected from minerals development, and it requires 'appropriate safeguards and mitigation measures'. Planning should not be granted unless the Council is satisfied that the appropriate safeguards are in place. It is understood that the detail of the stand-off may not yet be available for assessment and therefore to allow the application to proceed and should planning permission be granted, it is expected that two conditions would be imposed to ensure that no work takes place so as to undermine the oil pipeline or undermine any land within 10 metres either side of the pipeline; and to ensure that for blasting operations within 400 m of the oil pipeline there is compliance with a maximum PPV of 25mm/s at the nearest section of pipeline to any blast.*
298. **Cadent Gas Limited** *No objection.*
299. *It is a statutory requirement that as the planning application affects a High-Pressure Pipeline, the HSE is consulted on the planning application.*
300. *Originally a holding objection was triggered due to the presence of a High-Pressure Major Accident Hazard Pipeline (MAHP) and/or an Intermediate Pressure Pipeline and/or an Above Ground Installation. The objection has now been removed.*
301. **National Grid** *No objection.*
302. **The Health and Safety Executive (HSE)** *No objection.*
303. *HSE does not advise, on safety grounds, against the granting of planning permission in this case.*
304. **Ministry of Defence (MOD)** *No objection.*
305. *There are no safeguarding objections to the proposals.*
306. **NCC (Public Health), Severn Trent Water Limited, Planning Casework Unit, Lincolnshire County Council, Alverton & Kilvington Parish Meeting, Claypole Parish Council, Cotham Parish Council, Elton-on-the-Hill Parish Meeting, Fernwood Parish Council, Long Bennington Parish Council, Orston Parish Council, Staunton Parish Meeting, Churches Conservation Trust, Fernwood Residents Association and Suthers School** have made no response. Any comments received will be reported orally to Committee.

## **Publicity**

307. The application has been publicised by means of a press notice in the Newark Advertiser, the display of site notices and 101 neighbour notification letters have been sent to the nearest occupiers, including all properties in Cotham Village, Sutherland School, Cross Lane and all identified local farmsteads, including Balderton Grange Farm and Cowtham House Farm, in accordance with the

County Council's adopted Statement of Community Involvement, including advice contained in the Covid 19 Addendum when this was in place.

308. The planning application has been re-publicised following the receipt of each of the two Regulation 25 supplementary information submissions by the publication of a further press notice in the Newark Advertiser and the display of further site notices to ensure compliance with the publicity obligations in the Town and Country Planning (Environmental Impact Assessment) Regulations 2017. Further neighbour notification letters have been sent to those individuals who made representations on the original application and subsequent Regulation 25 submission.
309. Three letters of representation have been received raising objections, one of which has been signed on behalf of an extended farming family and is representative of five separate households within Fen Lane, Long Bennington. Objections have been raised on the following grounds:

#### Blasting impacts

- (a) Mining and blasting could have a substantial effect on buildings. Can the company categorically state that, if as a result of their works, there will not be any settlement/subsidence and movement to buildings which could necessitate increased premiums for building insurance for homeowners within the area?
- (b) Our property is starting to show signs of cracking to the structure; and any further development towards our property will probably cause more damage;
- (c) Would there be compensation towards any structural damage from the development?

#### Visual and landscape impacts

- (d) The company state that all affected land will be reinstated back to its original condition (but not until 2044). However, one only has to look at the eyesore, known locally as Ayres Rock, to know that in the past, the company responsible for this, appears to have scant regard for reinstating the landscape to its original condition;

#### Vibration and noise impacts

- (e) The last few years have seen a daily 'rumble' from explosions from the current site;
- (f) Increased noise around the proposed site;

### Dust impacts

- (g) Increased dust particulates/pollution affecting peoples' quality of air, which would be detrimental to health (one of the occupiers is asthmatic);

### Traffic impacts

- (h) Increased traffic flow in and around the proposed site;

### Proximity to residential/farmstead development

- (i) The southern extension encroaches nearer to residential property (Airfield Cottages);
- (j) It will have a negative impact upon nearby residents' quality of life;
- (k) The extension would bring quarrying adjacent to farmland, separated only by the Shire Dyke;
- (l) Concerns as to whether levels of water in Shire Dyke would be affected, either with higher levels caused by pumping or lower levels due to water draining from the dyke into the large pits created by gypsum extraction, either of which could be detrimental to the business because of the effect on crop yields (Willow Tree Farm);
- (m) Concern as to whether there would be any other issues that could affect nearby crops and whether there would be compensation for any such affected crops;
- (n) Concern as to how close quarrying would take place to Shire Dyke and how far gypsum loosened by blasting would reach;
- (o) What compensation is proposed for potential 'inconvenience' that may be suffered if this extension to the quarry takes place?

### Environmental impacts

- (p) The impact on the environment and the surrounding area, it will have a negative impact upon the wildlife and environment;

### Cumulative impacts

- (q) Several installations have been developed in and around Cotham, for example, the wind turbines and a new solar farm over the last five years, which has significantly impacted the landscape of the locality and degraded roads and verges;

### Other issues

- (r) Concern that a new landfill will be established, as the current landfill opposite the proposed development is now complete.
310. One further letter of representation has been received in response to the Regulation 25 re-consultation from a local Cotham resident. Whilst there is support for the application on economic grounds associated with making use of the reserves of gypsum, the grounds of concern are set out as follows:
- (a) Given the importance of the environment, the company should make adjustments to the existing proposals for the benefit of wildlife and the natural environment;
  - (b) No commitment is made to how far away quarrying and associated activities would be from Grange Lane and other boundaries;
  - (c) The applicant should provide assurances to provide a 100m width strip of land on the western edge of the proposed extension (Grange Lane), to help the environment; enabling tree planting and habitat work at the beginning of quarry operations rather than towards the end;
  - (d) There should be improvements to the landscape quality at the outset rather than waiting for the quarrying at the southern end to be completed;
  - (e) Setting the quarrying operations further away from Grange Lane by creating an early belt of trees in the 100m strip of land would help amenity and the wildlife value of Grange Lane longer term;
  - (f) Having a wider area of early planted trees would help dampen further the potential for noise and dust;
  - (g) Gaps in the boundary hedge along Grange Lane should be filled in and the width of the existing hedge increased where possible;
  - (h) The 4m high bund should be gently sloping, so that it blends in better with the landscape;
  - (i) Cotham Thorns to the west of Grange Lane, close to the southern end of the proposed quarry is not referred to as having had any assessment of how it may be impacted by the temporary loss of habitat from the quarry extension. Having environmental enhancements start early, would reduce the risk of adversely affecting existing wildlife corridors, given that there are birds of prey and bats in the vicinity;
  - (j) Grange Lane experiences fly tipping and littering; is the applicant able to take any additional measures to prevent this happening?
  - (k) Is the applicant able to prevent unauthorised vehicle access to the southern extension?

- (l) What is the future land use of the restored landscape once extraction has been completed? Is there a minimum period that the restored landscape would be protected from further development (for e.g. being sold off for housing development, solar farm, industrial use)?
- 311. Councillor John Lee has been notified of the application. When the application was first submitted, the previous County Councillor for Balderton, Councillor Keith Walker, was also notified of the application.
- 312. The issues raised are considered in the Observations Section of this report.

## **Observations**

### Introduction

- 313. Nottinghamshire is recognised as a major producer of primary gypsum. An estimated 1.5 to 2 million tonnes of gypsum is extracted in the UK every year and the county accounts for a significant proportion of that total. The 'Newark Gypsum' worked at Bantymock Quarry, is one of two distinct gypsum resources found in the county, the other being the 'Tutbury Gypsum' worked at the Marblaegis Mine at East Leake. The 'Newark Gypsum' is identified as being of national importance, in that it contains two seams of the very highest quality, and it is the only mineral of this grade to be found in the UK.
- 314. Newark's Bantymock Quarry is critical to the applicant's operations, with the quarry supplying gypsum primarily to the associated Jericho Works, together with Saint Gobain's other manufacturing plants in Nottinghamshire (East Leake), Leicestershire (Barrow-on-Soar) and Staffordshire (Fauld); where there is an increasing demand for Bantymock's high purity gypsum. In terms of manufactured products, some 75% of gypsum is used in plaster and plasterboard, 20% in cement, and the remainder, comprising the highest quality gypsum has a wide range of specialised uses including specialist plasters, ceramics, and a wide range of other products ranging from dentistry to food additives.
- 315. It is noted that since the mid-1990s national and local gypsum production has declined due to increased supplies of 'synthetic' gypsum (known as de-sulphur gypsum' or DSG), a by-product of flue gas desulphurisation plants that have been retrofitted at most coal-fired power stations, including all three power stations in Nottinghamshire. Historically, DSG has been blended with mined gypsum, reducing the need for primary gypsum. This has resulted in lower depletion rates of consented reserves of natural gypsum and the conserving of resources including the permitted reserves at Bantymock Quarry. However, coal fired power stations are progressively being phased out under Government initiatives to tackle climate change, and consequently DSG production has reduced over recent years, with a corresponding increase in the need for primary gypsum.

316. There appears not to be a long-term future of DSG as new emission controls due in the 2020s is resulting in the closure of coal-fired power stations or a switch to other fuels. This is likely to increase demand for natural gypsum, as DSG production continues to decline.
317. Reference is now made to those material considerations relevant to the determination of this planning application.

#### Planning policy assessment

318. In accordance with the statutory requirements, set out under Section 38 (6) of the Planning and Compulsory Purchase Act 2004, this planning application must be determined in accordance with the Development Plan, unless there are material considerations which indicate otherwise.
319. For the purposes of this application, the Development Plan comprises the Nottinghamshire Minerals Local Plan (MLP) (Adopted March 2021); and the Newark and Sherwood Amended Core Strategy Development Plan Document (March 2019) (NSACS) (Adopted March 2019) and the Newark and Sherwood Allocations and Development Management Plan Document (NSDPD) (Adopted July 2013). Whilst the Fernwood Parish Neighbourhood Plan (FNP) 2016-2031 (Submission Version) covers the Bantycok application area, paragraphs 37 and 38 make reference to the quarry and confirm that matters relating to the quarry are dealt with under the MLP.
320. The relevant national policy considerations material to this proposal are those contained in the National Planning Policy Framework (NPPF) (20 July 2021), and the updated Planning Practice Guidance (PPG), including a section on minerals (17 October 2014).

#### Need for the development

321. The NPPF expects planning decisions to proactively drive and support sustainable economic development and places significant weight on the need to support economic growth through the planning system.
322. Paragraph 81 of the NPPF places a requirement on the planning system to create the conditions in which businesses can '*invest, expand and adapt*'. It states that '*significant weight should be placed on the need to support economic growth and productivity, taking into account both local business needs and wider opportunities for development*'.
323. Paragraph 211 of the NPPF reinforces the above policy stating that 'when determining planning applications, great weight should be given to the benefits of mineral extraction, including to the economy, subject to there being no unacceptable adverse environmental impacts'.
324. Bantycok Quarry is one of only two providers of primary gypsum in Nottinghamshire and of high significance and importance in the supply chain of



not only the construction industry but also the associated specialist manufacturers, both within the county and neighbouring region, including its associated works at Balderton (Jericho Works) and East Leake. It is noted that the mineral is an essential raw material for the applicant's manufacturing sites in Nottinghamshire (East Leake), Leicestershire (Barrow-on-Soar) and Staffordshire (Fauld), as well as its directly associated plant at the Jericho Works; and that there is increasing demand for BantycocK's high purity gypsum in a wide range of specialist products. It is important therefore that an established quarry such as BantycocK is able to supply both the construction industry and the specialist manufacturers over the medium to longer term, particularly as the country's economy seeks to recover from the coronavirus pandemic.

325. In response to the objection from Newark Town Council, the applicant company is the only operator in the county that mines gypsum so any grant of planning permission would not have implications for other gypsum operators in the county, as there are none.
326. Whilst it is recognised that there is sufficient short-term provision of permitted mineral reserves at BantycocK, it is anticipated that the gypsum reserves within the quarry would be exhausted within the next two to three years. Therefore, to secure the medium to longer term future of the quarry, there is a requirement and an identified need for the applicant to secure the allocated reserves in the southern extension. Without the winning and working of this gypsum there would be insufficient supplies of gypsum to ensure mineral supplies at BantycocK continue to be available beyond 2024/2025.
327. A grant of planning permission for a southern extension to BantycocK would secure a long term 15-year extension to mineral extraction at BantycocK ensuring that it continues to positively contribute to the economy, a fact that the NPPF requires the County Council to give significant weight to, in terms of this planning decision. The economic emphasis of this development is particularly relevant. The recovery of the allocated reserves in the proposed extraction area to the south would allow the quarry to continue to operate and maintain the existing economic and employment benefits which the quarry provides both in terms of direct employment, including at its associated manufacturing plant (Jericho Works), and associated operations such as road haulage. It would maintain a vital release and supply of high-grade gypsum into the Midlands region and support the continuing contribution of the site and its associated manufacturing plants to the local and regional economy. The socio-economic benefits of the scheme are material in the determination of this planning application. The proposals would therefore be in accordance with paragraphs 81 and 211 of the NPPF. It is noted that planning for mineral provision must be seen in the wider context in terms of supporting the economy, particularly enhanced as the country moves forward into the post-pandemic recovery phase, and also in support of the government's growth and levelling-up agenda.

Landbank/mineral reserves

328. In terms of assessing whether there is currently a need for the extraction of the mineral reserves from the Bantymock Southern extension, in planning policy terms the starting point is to understand the position of the County's gypsum landbank and how demand for the mineral is proposed to be met by the site allocations identified within the adopted MLP.
329. The following section examines the need for the new mineral reserves that would be released in granting planning permission for the southern extension area in terms of current supply of gypsum and permitted levels of consented reserves.
330. Paragraph 209 of the NPPF seeks to ensure that adequate supplies of minerals are maintained to support the development of infrastructure, buildings, energy and goods that the country needs. As such, at paragraph 214, there is a requirement on minerals planning authorities to plan for a steady and adequate supply of minerals including industrial minerals, of which gypsum is one, to ensure an adequate provision of industrial minerals to support their use in industrial and manufacturing processes.
331. In support of this approach, the NPPF encourages local planning authorities to incorporate allocations within their local development plans of specific sites where reserves have been identified. The adopted MLP approach is consistent with the NPPF in terms of its allocation of permitted reserves at Bantymock Quarry (currently the remaining reserves in the north-eastern part of the quarry) and a proposed southern extension and reflects the fact that there is neither a national demand forecast nor a local apportionment figure for gypsum.
332. At a national level, the need for mineral reserves is governed by the provision of 'landbanks', which is essentially a stock of permitted reserves that are capable of sustaining production over a set number of years. With regards to industrial mineral sites, paragraph 087 of the PPG identifies that 'stocks of permitted reserves' are one of the most important indicators when assessing whether or not further permitted reserves are required; and that this should be used by Local Planning Authorities when making decisions on planning applications relating to existing industrial minerals sites, (Paragraph: 087 Reference ID:27-087-20140306).
333. In this respect, Paragraph 214 of the NPPF states that mineral planning authorities should plan for a steady and adequate supply of industrial minerals by 'maintaining a stock of permitted reserves to support the level of actual and proposed investment required for new or existing plant, and the maintenance and improvement of existing plant and equipment'. It is identified that these reserves should be at least 15 years for cement primary (chalk and limestone) and secondary (clay and shale) materials to maintain an existing plant, and for silica sand sites where significant new capital is required; and at least 25 years for brick clay, and for cement primary and secondary materials to support a new kiln.
334. In terms of the guidance, whilst it does not specifically make reference to gypsum, based on the PPG's own definition of an industrial mineral at

paragraph 086, ('essential raw materials for a wide range of downstream manufacturing industries') it is nevertheless considered reasonable to accept that gypsum is an industrial mineral akin to cement (as opposed to an aggregate or energy mineral for which different guidance is applicable), given that it does have its industrial applications. As such, national policy clearly indicates that each existing 'plant' should have sufficient reserves or 'landbank' with the benefit of planning permission to sustain 15 years of production and maintain the plant.

335. Whilst gypsum is not specifically referred to in the NPPF at paragraph 214, it is an industrial mineral and in this respect it is considered reasonable to transpose the guidance on landbanks for the raw materials for cement production, to gypsum, i.e. a landbank of at least 15 years should be maintained when associated with an existing plant, as in the case of Bantycok Quarry and the associated Jericho Works. Given the high purity of the gypsum deposit at Bantycok, it would not seem unreasonable to argue that the landbank should actually be higher.
336. The County Council's most recent assessment of gypsum provision in Nottinghamshire is provided in the Nottinghamshire Minerals Local Plan Authority Monitoring Report (AMR) (dated January 2020) covering the period from 1<sup>st</sup> April 2016 to 31<sup>st</sup> March 2019.
337. Paragraphs 3.28 to 3.29 address the supply of gypsum. It noted that there are no production forecasts, landbank criteria or specific government guidance that relate to gypsum provision. Demand for natural mill and cement grade gypsum, used in the manufacture of plasterboard and plaster, is likely to have declined significantly due to the increasing substitution by DSG. However, it is noted that this trend is now anticipated to be increasingly reversed, due to a significant reduction in available levels of DSG given the impending closure of coal-fired power stations.
338. At paragraphs 3.30 and 3.31, the report identifies that the current landbank of permitted reserves for gypsum in Nottinghamshire remains stable, both in terms of mineral worked by opencast methods at Bantycok Quarry and underground methods from Marblaegis Mine, with reserves expected to be adequate until the mid-2020s for both permitted sites. Regarding Bantycok Quarry, it is indicated that permitted reserves are expected to be sufficient until 2027 and that a southern allocation in the MLP has been allocated to enable quarrying to take place over the longer term.
339. Paragraph 4.73 of the adopted MLP again reiterates that there is no national demand forecast or requirement to identify a local apportionment figure for gypsum production and that it is up to the industry to identify adequate reserves to maintain production.

#### Site allocations within the Minerals Local Plan

340. The adopted MLP identifies a series of site allocations across the County, with the aim of ensuring that sufficient mineral resources are identified for extraction to meet the anticipated levels of need throughout the period of the plan.
341. Paragraph 008 of the PPG requires MPAs to plan for a steady and adequate supply of minerals, prioritising the designation of specific sites where viable resources are known to exist and where the proposal is likely to be acceptable in planning terms. (Paragraph: 008 Reference ID:27-008-20140306).
342. The stated expectation of the MLP is that current and future provision of gypsum in this part of the county would be met by existing permitted reserves, sufficient until 2025 and an allocation to the south of the permitted reserves over the lifetime of this plan, which covers the period to 2036. The existing allocation together with the site specific allocation to the south would provide for the likely need and meet the demand, as identified by the applicant.
343. The adopted MLP incorporates assessments of future mineral requirements for the plan period until 2036 and a range of site allocations have been made to ensure that sufficient mineral resources are available to meet this demand. The proposed southern extension to Bantycok Quarry is identified within the MLP for allocation for minerals extraction. The site has consistently been identified as an allocation in the MLP, both in terms of the previous 2005 plan and the current plan with the applicant consistently supporting and promoting the inclusion of the southern extension through the plan preparation process as a prospective allocation. This means that the merits of the Bantycok southern extension allocation have been consistently assessed, re-assessed and promoted through the MLP.
344. Adopted MLP Policy MP7 confirms that the County Council will endeavour to maintain a landbank of permitted reserves of gypsum sufficient for its long-term extraction and to maintain sufficient production capacity at both Bantycok Quarry and Marblaegis Mine, in order that Nottinghamshire will meet its reasonable share of regional provision of minerals throughout the plan period.
345. The proposed southern extension to Bantycok Quarry, for which permission is being sought through this planning application, is allocated for mineral extraction within the adopted MLP. This planning application must therefore be assessed as an allocated site in the context of adopted MLP policy.
346. Under the Minerals Provision Policies in the adopted MLP, Policy MP7 sets out the gypsum provision for Nottinghamshire. This relates to the supply and demand for gypsum in the county and reflects that, unlike aggregates, there is no national demand forecast, nor is there any reliable data regarding its supply and demand. Notwithstanding this, the demand for gypsum, which depends on the construction industry, is broadly in line with that for aggregate production; although the trend in demand for primary gypsum has been significantly reduced in recent years due to the availability of DSG. However, it is recognised that the future demand for natural gypsum is likely to increase given the anticipated continuing decline in DSG production.

347. It is acknowledged that the use of DSG within the applicant's associated plants including in Nottinghamshire at the Jericho works and East Leake works has reduced the need for primary won gypsum, the consequence of which has been the enhanced management and conserving of reserves. However, as noted in the Annual Monitoring Report, supplies of DSG are falling, and it is noted that the applicant states that this decline in DSG production is quite marked, based on its own experience. In fact, over the last eight years, demand for mined and quarry gypsum products (from both the UK and imported) has increased as a result of the reduction in the availability of synthetic gypsum produced by both UK and European coal-fired power stations. In view of this, the applicant indicates that the company has invested in the installation of new milling capacity at several of its works, including East Leake. As such, there has been a progressive move back to using gypsum extracted from quarries and mines, a trend which is expected to continue. The demand for primary gypsum would therefore be anticipated to rise exponentially.
348. Policy MP7c of the adopted Minerals Local Plan allocates a southern extension at Bantymock Quarry to maintain supplies once existing permitted reserves have been exhausted. It identifies the area subject to this planning application.
349. In terms of identifying an adequate supply of gypsum to meet demand over the plan period, again an allocation for a southern extension to Bantymock is included in this policy; allocated under MLP Policy MP7c, as an 8.5 million tonne allocation together with the extraction of remaining reserves at the permitted sites of Marblaegis Mine and Bantymock Quarry, under MLP Policies MP7a and MP7b respectively.
350. As outlined in the supporting text of MP7c, there is no national demand or forecast for gypsum and therefore it is for the industry to identify reserves and maintain production. British Gypsum have outlined within their planning statement that due to current extraction rates, the permitted reserves at Bantymock will be worked out by 2024/2025. With the southern extension providing a further 5 million tonnes of gypsum, this would extend the life of the mineral operations for a further 15 years, until 2044, and ensure long-term provision for the plant and continue to meet the demand for gypsum.
351. Policy MP7c also outlines that any planning application for the allocated site should be made in accordance with the site development brief provided within Appendix 2. The site allocation brief states that '*restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site. Proposals should instead focus on maximising the biodiversity benefits from larger areas of priority habitat*'. It is highlighted that following examination, the MLP was amended to add reference to net gain particularly in terms of Policy SP2, and that the Inspector did not question Policy SP2 referencing the word '*maximising*' when referring to biodiversity and including cross referencing in Policy SP2 to the appended Site Allocation briefs which define individual briefs for each site. The resulting MLP Policy SP2 (3) states that '*Restoration schemes for allocated sites should be in line with the relevant Site Allocation Brief contained within Appendix 2*'.

352. In this respect, this brings the contents of the briefs within the terms of the policy and it is considered that this policy link elevates the briefs and gives them stronger weight than would have been the case had the brief not referenced Policy SP2 and provides strong policy support for targeting a 'high' habitat creation approach at Bantycok South. British Gypsum have considered the site development brief within their planning statement and outline considerations made within the application in relation to the points raised within the brief. The nature conservation organisations (Natural England, Nottinghamshire Wildlife Trust and the County Council's Ecologist) have been consulted on the proposed restoration scheme for the southern extension to Bantycok, to determine whether the target habitat creation delivers on the policy requirement. It is evident that the site allocation brief and MLP Policy SP2 make clear that biodiversity gains should be maximised.
353. Under the current extant planning permission, Bantycok Quarry can extract gypsum up to the 31<sup>st</sup> December 2027, which is less than 10 years of viable production. Notwithstanding this, based on current extraction levels, extraction from the existing quarry is anticipated to be completed by 2024/25 with this falling well short of National Planning Guidance levels which advocates at least 15 years of permitted reserves for existing plants, with this increasing to 25 years where investment is needed in new plant and machinery. Based on this assessment, there is clearly a significant shortfall and the southern extension to Bantycok quarry would increase the permitted reserve by approximately 15 years. This would provide a degree of certainty to the supply side of the quarry, maximising the extraction rates of a high quality first grade mineral resource and secure the annual production rate of approximately 400,000 tpa for a further 15 years, when reserves are exhausted at the existing permitted mineral reserves at the existing quarry.
354. Consideration is given to the need for the proposed development in terms of the gypsum resources it would yield. The prime focus of the proposed development is to release around 5 million tonnes of high quality gypsum reserves in an area immediately south of the currently approved quarry. The need for new mineral reserves is a material consideration which is to be balanced against the assessment of the acceptability in terms of environmental impacts of the proposed development.
355. Within Nottinghamshire the priority is to make the best use of the county's finite mineral resources through supporting extensions to existing sites, where environmentally acceptable.
356. Strategic objective SO1 of the adopted MLP relates to improving the sustainability of minerals development. In this respect, it seeks to ensure that there is more efficient exploitation and use of primary mineral resources; and it gives supports to the improved use or extension of existing sites. Strategic objective SO2 seeks to create a prosperous, environmentally sustainable and economically vibrant county through an adequate supply of all minerals to assist in economic growth both locally and nationally. It seeks to ensure that sufficient land is provided to enable a steady and adequate supply of minerals over the plan period.

357. Strategic Policy SP1 of the adopted MLP states that the strategy for the supply of minerals in Nottinghamshire is to give priority to the extension of existing sites, where it is economically, socially and environmentally acceptable to do so. The priority is to maintain a steady and adequate supply of minerals during the plan period but to do so in a sustainable way. The supporting text at paragraph 3.11 emphasises the need to improve the sustainability of minerals development by extending existing sites wherever feasible before considering new locations.
358. The applicant, through geological investigations, has both demonstrated and proven conclusively that there are additional high-grade gypsum reserves in the area to the south of the current permitted quarry. As such, the proposed southern extension under MLP Policy MP7c provides a logical and sustainable continuation of the existing workings, particularly as the processing plant would be retained and the existing infrastructure is in place making this a sustainable use of existing resources. Gypsum from the proposed southern allocated area would be transported internally to this area in a straightforward continuation of existing working practices. As such, the proposal is in accordance with Strategic Objective S01 and Policy SP1 of the adopted MLP. Strategic Policy SP1 gives significant weight to supporting a southern extension to Bantycok Quarry.
359. On the supply side, the applicant's analysis of the reserves remaining at Bantycok, along with the projected demand from the applicant's works indicates that by 2024/25 the reserves would be exhausted. This is less than the 2036 referenced above meaning that there is a shortfall in the landbank. It is noted that by including the proposed southern extraction area, the reserves would be increased by approximately 15 years and that this projection in terms of permitted reserves, if planning permission is granted, would be sufficient to re-instate the landbank to the required levels deemed necessary to support an existing plant site at an established industrial mineral extraction site. As such, the proposed development accords with paragraph 214 of the NPPF and MLP Policy MP7c and these policies give great weight in support of the proposals.
360. As such, in accordance with PPG Policy 087, based on an analysis of permitted reserves at Bantycok by the applicant, there is a clear and demonstrable need for the allocated reserves contained in the southern extraction area. There is significant strategic policy support for the planning application. The proposed development is in accordance with Paragraph 214 of the NPPF, and it is considered both reasonable and proportionate to support re-instating a 15 year landbank, which would be delivered by granting planning permission for the winning and working of gypsum reserves contained in the proposed southern extension. There is significant strategic policy support for the reinstatement of the 15 year landbank. The existing permitted reserves and the proposed gypsum reserves in the southern extension would be sufficient to provide an adequate supply of gypsum over the plan period, which covers up until 2036. It would secure the supply side of the business going forward over the longer term and is consistent with both MLP Policy MP7 and the NPPF paragraph 214. Significant weight can be given to the strategic policies in the MLP including the proposed southern extension allocation under Policy MLP MP7c within the

decision-making on this planning application and in support of the proposed extension at this present time.

361. Overall, as the proposed extension is a proposed allocation in the adopted plan to help ensure the continued longer-term supply of gypsum, the proposed development would be supported from a policy perspective, subject to there being no unacceptable environmental impacts.

#### Assessment of Environmental Impact

362. To assist the MPA in making an assessment of the environmental effects of the development, the planning application is supported by an Environmental Impact Assessment (EIA) prepared under the 2017 Environmental Impact Assessment Regulations. The EIA has sought to comprehensively assess the environmental implications of development; its findings have been examined and appropriate technical advice has been taken through the planning consultation process. The findings, conclusions and recommendations of this assessment are considered below in the following observations.

#### Landscape and Visual Impact

363. Adopted MLP Policy DM1 (Protecting Local Amenity) states that proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity are avoided or adequately mitigated to an acceptable level. The types of impacts that need to be considered include landscape and visual impact.
364. Policy DM5 (Landscape Character) of the adopted MLP states that proposals for minerals development will be supported where it can be demonstrated that it will not adversely impact on the character and distinctiveness of the landscape. Development that would have an unacceptable impact on the landscape interest will only be permitted where there is no available alternative, and where the need for development outweighs the landscape interest and adequate mitigation can be provided. It also states that landscaping, planting and restoration proposals should take account of the relevant landscape character policy area as set out in the landscape character assessments covering Nottinghamshire.
365. The supporting text at paragraph 3.57 states that all landscapes hold value, with some having the potential to be improved and restored. It reiterates the fact that mineral working has the potential to change the landscape, but that sensitive, high quality, restoration can also help to improve existing landscapes, especially those which may be of a lower quality.
366. The planning application is supported by a Landscape and Visual Impact Assessment (LVIA), as part of the ES. The County Council's Landscape Consultant is satisfied that the LVIA has been carried out to the accepted best practice, guidance and methodology, and it is noted that for the purposes of this assessment, effects which are 'major/moderate' or 'major' are considered to be a 'significant effect'.



367. The aim of the assessment is to identify and where possible mitigate any 'significant' changes to the landscape or to the views resulting from the proposed development. In this instance, the assessment of effects focusses on those arising from the proposed southern extension, and includes a qualitative appraisal of landscape and visual effects resulting from the proposed extension of time for the existing quarry processing and storage area along with the access road.
368. In landscape and visual terms, the key features that have the potential to affect landscape and visual amenity are: the removal of individual trees, hedgerows, ditches and vegetation; the stripping of soils and overburden from the extraction areas; construction of perimeter screen mounds; construction of temporary stockpiles and spoil heaps; the continuation of use of existing site facilities, including primary crusher, welfare facilities, lighting and haul routes; the extraction of gypsum and creation of temporary extraction voids; the movement of mobile plant and haul routes within the site and to the processing plant at the Jericho works north of Staple Lane; and the implementation of restoration proposals including the creation of final landform, water bodies, soiling and planting.

#### Landscape impacts

369. It is identified that the proposed southern extension site falls within the National Character Area (NCA) of the Trent and Belvoir Vales. In the context of the Newark and Sherwood Landscape Character Assessment, SPD, December 2013, at a county level, the site is situated within the South Nottinghamshire Farmlands Regional Character Area, the key characteristics of which are an undulating, strongly rural and predominantly arable farmland, centred on the River Trent; a low-lying rural landscape with relatively little woodland cover; and the southern and eastern edges of the vales, which are defined by the adjoining escarpments of the Lincolnshire Edge and the Leicestershire and Nottinghamshire Wolds NCAs. The Newark and Sherwood Landscape Character Assessment SPD further divides the landscape to the south of Newark into a series of policy zones which set out sensitivity, condition, and objectives for the management of the landscape. In this context, the existing working quarry at Bantymock lies entirely within Policy Zone SN PZ 08: Cotham Village Farmlands which is assessed as being of 'very poor' landscape condition and of 'very low' landscape sensitivity.
370. The objectives for this area are to create new hedgerows and restore existing, seek opportunities to create historic field patterns where feasible and to contain new development within historic boundaries; to seek opportunities to restore arable land to pastoral; to enhance tree cover and landscape planting generally, to create increased visual unity and habitat across the policy zone; to create small-scale woodland; and to conserve the ecological diversity and biodiversity of the designated LWS. The western part of the proposed southern extension area is situated within Policy Zone SN PZ 08, whilst the eastern part of the site falls within Policy Zone SN SZ 09, for which there are no provisions for either landscape condition or sensitivity analysis. However, given that the eastern

edge of the proposal site is close to the border with Lincolnshire, the LVIA references the South Kesteven Landscape Character Assessment.

371. The value, susceptibility and sensitivity of the site and the surrounding study area has been assessed in the LVIA. It is identified that the sensitivity of the South Nottinghamshire Farmlands Landscape Character Area is assessed as 'low', and that of the South Kesteven, Trent and Belvoir Vales Landscape Character Area as 'low/medium'. The overall sensitivity of the proposal site is therefore assessed as 'low', meaning it is of 'low' value and 'low' susceptibility to change.
372. The landscape value therefore attributed to the site area is 'low' and there are no national landscape related designations. The overall condition of the landscape within the wider setting is considered to be poor, due to large-scale agricultural practices and existing gypsum operations. Overall, the proposal site and its immediate surroundings are assessed as being of 'low' landscape sensitivity.
373. Past and present mineral workings are evident throughout the area, with large overburden bunds and screening mounds forming prominent features within the immediate vicinity of the proposed southern extension. Both the wider quarry site and the localised landscape display industrialised characteristics, with a complex of large-scale, tall industrial buildings at the Jericho Works. Other man-made features including wind turbines, solar PV farms, high voltage transmission lines, and the A1 trunk road further detract from the rural setting.
374. It is identified that the direct physical impact of the development of the southern extension would result in the loss of 4110 m of existing hedgerows; 0.1 ha of existing woodland; 146.7 ha of existing agricultural land; and the creation of deep quarry voids, temporary soil and overburden stores and permanent large-scale changes in topography.
375. The assessment highlights that quarrying is an established activity within the locality and as an extension to Bantycok's existing quarrying operations, the works across the southern extension area would not introduce a new or unfamiliar activity to the locality although it is recognised that the proposed development would permanently modify the landform and increase the extent of 'industrial activity' within the locality compared to that existing. However, notwithstanding this, this would be temporary and apart from the landform, the effects would be reversible. Extractive operations within the proposed southern extension area would be limited to a maximum period of approximately 15 years (medium-term) after which the site would be fully restored. In addition, the proposed southern extension area would be worked in phases and progressively restored as operations progress. The residual landscape would improve the landscape character, biodiversity value, and scenic quality of the landscape compared to that existing.
376. Post-restoration (year 15) all industrial activities would have ceased, quarry voids would have been backfilled to form gently sloping profiles with a natural appearance; and a lake area and associated wetland features would be

established in the lower lying parts of the proposed southern extension site. By this stage, all soils would have been replaced and all temporary stockpiles removed. Parts of the land would have been returned to its original agricultural use, with increased areas of native hedgerows, new native woodland blocks, species rich and wet grassland, and improved public access to the area. It is noted that the restoration works would be a positive, permanent and irreversible change to the landscape. This would enhance the character and local biodiversity value within this part of the LCA. Overall, the magnitude of effect would be low to medium and the significance of that effect would be minor beneficial.

377. The restoration would meet some of the landscape actions of South Nottinghamshire Farmlands Policy Zone 08 Cotham Village farmlands in which the site is located such as the creation of new hedgerows and restoration of existing ones; enhanced tree cover and landscape planting more generally to create increased visual unity and habitat across the Policy Zone; the creation of woodland; restoration of arable land including to pastoral, within historic field patterns where feasible; and conserving the ecological biodiversity and biodiversity of the designated LWS.
378. Landscape effects during the extraction phase and post restoration are set out in the LVIA. In the main, these effects would be temporary and short-term and, over the long-term, most of the adverse effects on the landscape would be reversed, delivering long-term improvements in both the quality and diversity of the landscape compared to that existing. Post restoration (year 15), the overall magnitude of landscape effects is assessed as being marginally beneficial, mainly as a result of the introduction of new species rich and wet grassland habitat, enhancing both the site's landscape character and its biodiversity value.
379. Post restoration, groundwater levels would recover to create the lake, and associated lake margin habitats would be established; tree and vegetation planting would assist in the integration of the permanent established landforms into the wider landscape.
380. The scale of landscape effects on the South Nottinghamshire Farmlands LCA is assessed to be of 'minor to moderate adverse' significance, and in terms of the South Kesteven, Trent and Belvoir Vales Landscape Character Area is 'minor adverse'. On the site itself the scale of landscape effect during extraction is assessed as 'moderate adverse' reducing to 'minor/moderate beneficial' by year 15 of the restoration. In this respect, it is considered that post-restoration (year 15) all adverse landscape effects associated with the minerals development would be reversed. It is noted that the County Council's Landscape Consultant has not raised any concerns regarding these conclusions or summations. In terms of the ES, the landscape assessment has determined that the development would not give rise to any significant residual landscape effects post-restoration. Rather the restoration scheme would deliver beneficial effects with regards to the South Nottinghamshire Farmlands LCA of 'minor to moderate' significance, in terms of the Trent and Belvoir Vales Landscape Character Area, delivering an overall improvement on the existing pre-commencement landscape of the proposal site and its immediate setting.

381. In conclusion, it has been demonstrated that the magnitude of landscape change during the extraction period would be 'minor to moderate adverse'. The negative effects relate to the change in landform, land use, loss of vegetation including hedgerow, and the scale and form of the changing landscape. Following restoration, the significance of the identified landscape effects would be reduced to 'minor to moderate beneficial'. In terms of these impacts, it is considered that none of the landscape effects either during operation or restoration would be significant. As such, it is considered that subject to planning conditions ensuring suitable restoration is delivered, the proposed minerals development is compliant with Adopted MLP Policies SP5 and DM5 given that it would not have an unacceptable impact on the landscape; and post-restoration, it has been demonstrated there would be no adverse impact on the landscape character of the area.

### Visual impacts

382. Adopted MLP Policy DM1 (Protecting Local Amenity) states that proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity are avoided or adequately mitigated to an acceptable level. The types of impacts that need to be considered include landscape and visual impact.

383. To establish the visual impact of the proposed development, a 2km Zone of Theoretical Visibility (ZTV) was established around the proposed southern extension site and 11 viewpoints were identified in the LVIA, as agreed with the County Council's Landscape Consultant, prior to the assessment being carried out.

384. Using the assessment of viewpoint sensitivity, all 11 viewpoints were assessed to establish the predicted magnitude and significance of effects during the extraction phase, reflecting a worst-case scenario, and post restoration (year 15) when screen planting and other mitigation measures embedded within the scheme have become fully established.

385. The table below summarises the findings of the viewpoint assessment

Ref	Viewpoint	Level of effects of visual at extraction phase	Level of visual of effects at post restoration (year 15)
VP1	B6326 West of Fernwood, looking south-west	None	None
VP2	Fernwood Business Park, looking south-west	None	None
VP3	B6326 South of Fernwood, looking south-west	None	None

VP4	Public footpath 10/2 (not on definitive map) adjoining Fen Lane, looking north-west	Minor adverse	Minor beneficial
VP5	Public footpath 7/2 (not on definitive map), north of Fen Lane	Minor/Moderate adverse	Minor beneficial
VP6	Fen Lane at entrance to Willow Brook Farm, looking north-west	Negligible/Minor adverse	None
VP7	Grange Lane, north of Askerton House, looking north-east	Minor adverse	None
VP8	Cotham, looking north-east	None	None
VP9	Grange Lane, east of Cotham, looking north-east	Moderate adverse	
VP10	Grange Lane, north of Balderton Grange, looking south-east	Minor adverse	None
VP11	Sustrans Cycle Route 64, west of Balderton Grange, looking east	None	None

386. It is noted that the proposed southern extension area is remote and the locality within 2km of the site is sparsely populated. The ZTV indicates that quarrying and restoration operations would not be visible from the main areas of settlement surrounding Bantycok, identified as Balderton and Fernwood; neither would it be visible from the village of Cotham.
387. In terms of assessing the visual effects, it is noted that the ZTV extends outwards towards the south-west, south and south-east from the proposed southern extension site. For the purposes of this assessment, it has been agreed that views from the west would be prevented by the provision of screening bunds to the west of the proposed extraction site situated along the western site boundary abutting Grange Lane. It is noted that the applicant would also gap up the hedgerow along Grange Lane as part of the works to further improve screening. There are limited visual receptors to the south and south-east, with the exception of isolated farms and two stopped up public rights of way (PRoWs) that are not shown on the definitive map.
388. The LVIA also assesses the visual effects on adjacent villages, isolated residential properties, public rights of way, the Sustrans Route 64 and roads within the study area. The LVIA also considers the effects on Listed Buildings and the Balderton Conservation Area. It is identified that there would be no visual impacts above 'moderate adverse' for any of these receptors at the extraction stage.
389. In terms of the ES, the LVIA has demonstrated that the development would not give rise to significant residual visual effects.

390. The assessment has identified that the scale of visual effects during the extraction stage would range from 'no effect' to 'moderate adverse' and that the scale of visual effects at year 15 ranges from 'no effect' to 'moderate/minor' beneficial.
391. It is accepted that visual impacts would be extended by a further 15 years due to the extension of the period for quarrying, but that none of the impacts identified are significant in terms of the ES and LVIA.
392. The main areas with theoretical visibility beyond the application site extend in an arc from the east around to the south and these areas correspond with low lying, almost flat farmland where settlement is limited to occasional scattered farmsteads and isolated houses, and very few publicly accessible locations are present. Where views of the works would be possible, it is noted that these would be limited to the initial soil stripping activities and would be extremely localised views, notably being confined to two footpaths to the south, Fen Lane, a short section of Grange Lane, and several relatively isolated residential properties. To the north and west of the site, it is identified that there would be an extremely limited theoretical visibility of the proposed development, with screening being provided by a low-lying, north-south orientated ridgeline, which adjoins the application site to the west, together with additional screening afforded by the restored landforms, within the site.
393. The distant views into the southern extension site are prevented due to intervening screening afforded by surrounding hedgerows/vegetation and the recently restored landforms within the wider application site.
394. Views of the extraction activities, after initial soil stripping works, would not be possible from any location due to extraction works taking place below existing ground levels, and also due to the effective visual screening provided by the 4m high screen mound constructed along Grange Lane. Notwithstanding this, it is acknowledged that the substantial screening mound, in itself, introduces an adverse visual impact along Grange Lane and within the wider locality.
395. It is noted that the highest level of adverse visual effects identified during the extraction phase applies to only one of the eleven viewpoints assessed. This was at viewpoint 9, situated within Grange Lane. Here the visual effects associated with the development were assessed as being of 'moderate' significance. This related specifically to the proposed construction and visibility thereafter of a 4m high screening mound along the western boundary of the proposal site. It is recognised that this would be temporary and limited to the duration of the extraction works.
396. Lesser adverse visual effects were also identified in relation to a further five of the eleven viewpoint locations (Viewpoints 4, 5, 6, 7 and 10) during the extraction phase. It was identified that the remaining five viewpoint locations would not experience any visual effects due to existing screening features.
397. Upon restoration all adverse visual effects identified during the extraction phase would be fully reversed; and the highest levels of visual effects identified

following the restoration phase, at year 15, would be of 'minor to moderate' significance. This applied to viewpoint 9 and was judged to be beneficial.

398. At Year 15, beneficial visual effects of minor significance were also identified from viewpoints 4 and 5 following restoration. The remaining locations (viewpoints 1, 2, 3, 6, 7, 8, 10 and 11) were all assessed as experiencing no change compared to the existing baseline view, due to screening of the restored quarry by established planting to the perimeter of the site and intervening visual barriers.
399. In the scoping opinion for Bantycok South, the MPA requested that the visual assessment incorporated a comprehensive review of overburden management across the entirety of the Bantycok Quarry with an emphasis on reducing the visual effect of the existing overburden mound which is stored within the south-western corner of the existing site. This mound is visually prominent when viewed from Grange Lane due to its height, sparse vegetation cover and proximity to the perimeter of the site. It was requested that as part of a wider review of overburden management across the entirety of the enlarged Bantycok Quarry, opportunities should be investigated to reduce the prominence of this overburden mound including its removal by using it for restoration purposes at an early stage of the quarry development (potentially by making alterations to the currently approved restoration scheme for the site), its movement to a less prominent location within the site, and the seeding of any remaining overburden mound retained utilising surplus soils extracted from the site.
400. It is understood that inbuilt constraints within the scheme means that the mound cannot be accommodated elsewhere on site, given that the material stored is required for the final restoration of the processing plant area, on cessation of all extraction works. As a result, the existing mound would remain in situ for the duration of the southern extension works. Notwithstanding this, the LVIA indicates that to ameliorate the identified issue, the mound would be regraded to reduce its conspicuous and prominent appearance within the setting of Grange Lane. The resulting landform would then be seeded to further improve its visual assimilation within the landscape to mitigate views from both Grange Lane and other locations further afield. A planning condition would seek to secure these improvements.
401. It is noted that further 4m high screening bunds are proposed to be constructed to the western boundary of the proposed southern extension along Grange Lane. These would also be seeded, and would reduce views from the west including from the village of Cotham. It is noted that the bunds would be constructed from soils created by the initial soil strip, and that all soils subsequently stripped after this stage would be placed directly onto the backfilled overburden.
402. In accordance with the established method of working at Bantycok, all works would occur below ground level thus ensuring the works are kept as low as is practicable. Further mitigation would be provided by direct placement of soils wherever possible together with progressive restoration of the site, to minimise

disturbed areas visible at any one time. The visibility of the site from the wider surroundings would be restricted mainly by existing intervening vegetation and appropriately constructed screening bunds to the perimeter of the proposed southern extension site.

403. It is therefore concluded that the visual impacts have been minimised as far as is practicable and there would not be any significant long term negative visual effects from the development post restoration, subject to securing the proposed attenuation measures through appropriate planning conditions, thus ensuring the development is compliant with adopted MLP Policy DM1, in terms of visual amenity impact.
404. Overall, it is concluded that the proposed development would not give rise to any significant residual landscape or visual effects.

### Noise

405. Policy DM1 (Protecting Local Amenity) of the adopted MLP states that proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity, including that of noise, are avoided or adequately mitigated to an acceptable level.
406. Paragraph 211 of the NPPF states that when considering proposals for mineral extraction, minerals planning authorities should ensure that any unavoidable noise emissions are controlled, mitigated or removed at source, and that appropriate noise limits should be established in relation to extraction in proximity to noise sensitive properties. Where appropriate this will include establishing appropriate noise limits for extraction in proximity to noise sensitive properties.
407. The supporting text to MLP Policy DM1 at paragraph 5.12 reiterates national policy, and notes that appropriate measures to mitigate potential noise impacts include the use of noise suppression equipment on plant and machinery and acoustic barriers, site-specific noise limits and restrictions on site operating hours. It draws attention to the further guidance on noise assessment provided within the Planning Practice Guidance (PPG) chapter on minerals.
408. In terms of general amenity impacts, Policy DM5 of the Newark and Sherwood DPD states that development proposals should have regard to the impact on the amenity or operation of surrounding land uses and where necessary mitigate for any detrimental impact.
409. Paragraph 020 of the PPG states that 'minerals planning authorities should take account of the prevailing acoustic environment and in doing so consider whether or not noise from the proposed operations would:
- give rise to any significant adverse impact/effect;
  - give rise to an adverse effect; and



- enable a good standard of amenity to be achieved.’
410. The PPG also states that ‘in line with the Explanatory Note of the Noise Policy Statement for England, this would include identifying whether the overall effect of the noise exposure would be above or below the significant observed adverse effect level and the lowest observed adverse effect level for the given situation’. (Paragraph: 020 Reference ID: 27-020-20140306). Revision date: 06 03 2014.
411. Representations received from a number of near neighbours highlight concerns regarding the potential for noise nuisance arising from the proposals which would involve quarrying activities being brought closer to residential property, including the nearest farmsteads, and the potential impacts/effects on residential amenity.
412. It is recognised that the processes involved in working the mineral including the aspect of blasting have the potential to generate significant levels of noise, and accordingly a noise assessment has been undertaken to consider the magnitude of noise emissions from the proposed southern extension to Bantycok Quarry and to assess the impact upon the noise environment in the vicinity of the quarry, particularly in relation to those residential properties identified as being the nearest noise sensitive receptors to the proposal site.
413. The assessment has been carried out in accordance with the PPG and the Institute of Environmental Management and Assessment (IEMA) Guidelines for Environmental Noise Impact Assessment. Four monitoring locations have been identified representing the nearest residential properties. Noise predictions were then made based upon the methodology set out in BS 5228-1:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites – Part 1: Noise*. All sound predictions have been undertaken using the proprietary noise modelling software, CadnaA, which incorporates all the relevant calculation algorithms within BS5228:2009+A1:2014.
414. The noise assessment references relevant appropriate noise standards for mineral extraction sites incorporated in the PPG at paragraphs 021 and 022 (Paragraphs: 021 Reference ID: 27-021-20140306 and 022 Reference ID:27-022-20140306). This advises that the maximum noise level for such development during the normal working day (0700-1900hrs) should not exceed 10dB(A) over existing background levels (LA90,1hr) up to a maximum level of 55dB(A) LAeq, 1hr (free field), with an allowance for temporary operations such as soil stripping or forming earth bunds not exceeding 8 weeks in any calendar year which shall not exceed 70dB(A) LAeq, 1hr. For any operations during the period 22:00- 07:00 the noise limit should not exceed 42dB(A) LAeq, 1h (free field) at any noise sensitive property. The results of the noise assessment are set out in the table at paragraph 423. Extant planning condition 29 has been amended with regards to the allowance for temporary operations such as soil stripping or earth bund formation. Whilst it has historically been set at 4 weeks for such operations, there is no reason way it should not be set at 8 weeks which is standard practice in the PPG.

415. Attention is drawn to the fact that the noise impact assessment has been updated as of November 2021 in response to a Reg. 25 request for additional information by the County Council. This related to concerns regarding the effect of creating gaps in the peripheral bunding required to reduce the flood risks in the south-eastern part of the southern extension site and indirectly, the potential for a reduction in the effectiveness of the bunds in terms of them acting as a noise/acoustic barrier.
416. The plant that would be in operation at the site has been thoroughly assessed (in terms of the worst-case scenario), with all typical plant and machinery sources having been included in the noise model, as point sources at a height of 2m, and operating for 80 per cent of the time.
417. The dump truck movements have been modelled as a moving point source, with, in each instance, 10 movements per hour, with a speed of 10mph. In the plant area, the trommel, stacker, and screener have all been modelled as line sources with appropriate elevations. The cone crusher, jaw crusher, and loading shovels have been modelled as point sources with a height of 4m.
418. The HGV movements on the haul route between the plant processing area and the public highway have been modelled as a moving point source, with 7 movements per hour and with a speed of 10mph.
419. The updated noise impact assessment has considered a series of representative elevations. In this respect, the assessment has modelled plant within each cut at the following elevations:
- Topsoil removal: existing ground level with a 4m perimeter bund/temporary screening of line of sight to the nearest receptors, including gaps to facilitate three tributary drains from the Shire Dyke;
  - Overburden removal: existing ground level with a 4m bund at the site perimeter, including gaps to facilitate three tributary drains from the Shire Dyke;
  - Gypsum removal: dugout contours; and
  - Restoration: dugout contours.
420. In each instance, the cuts closest to the receptor under assessment have been considered. Free-field sound predictions have been made at the worst affected boundary of the receptor locations assessed.
421. Baseline noise surveys were conducted to inform the background noise levels. In this respect, the assessment predicted noise levels from site operations and compared predicted levels with measured background noise levels and guidance limits set out in the PPG for Minerals. In terms of the surveys, four monitoring locations were selected representing nine noise sensitive receptors (NSRs) soundscapes. These four locations, as follows, were considered representative of the nearest noise sensitive properties to the site:

- 1) Location 1 – at the western proposed site boundary (which is considered representative of receptors on Grange Lane; notably receptors R1, R7 and R8);
- 2) Location 2 – at the southern site boundary (which is considered representative of receptors off Fen Lane; notably R4, R5 and R6);
- 3) Location 3 – in the eastern area of the site (which is considered representative of receptors off the Great North Road; notably R2 and R3);
- 4) Location 4 – baseline noise survey data measured at 17 Williams Lane as part of the previous Environmental Statement Noise Assessment was used, to provide baseline measurements for receptors within the Fernwood area notably R9, No. 17 Williams Lane to the east of the northern extension area.

422. The County Council's Noise Consultant Engineer is satisfied that the amended noise assessment has considered a representative range of typical plant and that the predicted noise levels do represent the 'worst case' scenario, in terms of noise prediction. It is noted that all the noise predictions have been undertaken using the correct computer noise modelling software and appropriately taken into account the local topography comprising the south-eastern part of the southern extension area and its surrounding environs.

423. The County Council's Noise Consultant Engineer is also satisfied that the predicted noise levels demonstrate unequivocally that if all operations were to operate simultaneously, the cumulative noise level at all receptors would be below the specified limits of 10dB above measured background levels, and the absolute limit of 55dB LAeq, 1hour. These results are set out in the table below:

Location	Baseline LA90	LA90+10	Cumulative Operations (LAeq,T)	Difference (LA90+10-LAeq,T)
NSR1,(Balderton Grange)	41.9	51.9	50.3	-1.6
NSR2,(Cowtham House)	40.8	50.8	48.8	-2.0
NSR3,(Shirebridge Farm)	40.8	50.8	43.3	-7.5
NSR4,(Fen Farm)	39.3	49.3	47.8	-1.5
NSR5,(Turntable Pike)	39.3	49.3	42.6	-6.7
NSR6,(Willow Tree Farm)	39.3	49.3	43.6	-5.7
NSR7,(Manor Farm Bungalow)	41.9	51.9	41.7	-10.2
NSR8,(Balderton Grange)	41.9	51.9	51.6	-0.3

Cottage)				
NSR9,(17, Williams Lane)	45.0	55.0	42.8	-12.2

424. Taking into account the amendments made to the peripheral screen mounding in the south-eastern corner of the southern extraction site, that has been requested as part of the consideration of flood risk, the noise assessment demonstrates that if all operations were to operate simultaneously at all receptors, the cumulative noise level would be below the specified limits of 10dB above measured background levels, and the absolute limit of 55dB LAeq, 1 hour. It also demonstrates that when operating between 06:00 hours and 07:00 hours, processing plant operations would be below the limit of 42dB LAeq, 1 hour at all identified receptors.
425. With reference to the relevant guidance, it is therefore considered that the operational noise that would be generated by the site would have a low impact during all time periods at the nearest residential properties. A summary of the assessment's findings are set out in the table below.

#### Noise Summary Table

Receptor	Characterisation of the impact	Sensitivity of receptors	Impact magnitude	Potential significance and nature of effect	Additional mitigation	Residual impact magnitude	Residual significance and nature of effect
1 to 9 (inclusive)	Operational on-site Noise	High Day	None	None	-	None	None

426. It is noted that the volume of HGV traffic travelling to and from the site would remain unchanged and therefore increases from traffic noise are not anticipated.
427. In conclusion, it is noted that the County Council's Noise Consultant has confirmed that the updated noise impact assessment has clearly demonstrated that the creation of the gaps for the purpose of flood alleviation in the south-eastern part of the southern extension to Bantycok Quarry would not have any implications for, or noise impacts on, the nearest noise sensitive residential receptors. The noise assessment has conclusively demonstrated that at all nine identified noise sensitive receptors, when the proposed development is operating between the hours of 07:00 and 19:00hrs Mondays to Fridays, the cumulative LAeq,1hr noise level would be below the absolute daytime limit of 55dB(A); and when operating between 06:00 hours and 07:00 hours, the processing plant would be below the absolute night-time limit of 42dB(A).
428. In accordance with adopted MLP Policy DM1 (Protecting Local Amenities) planning conditions are recommended to regulate the noise emissions from the

development. The County Council's Noise Consultant is able to support the proposals subject to the extant noise conditions being appropriately updated and carried forward to the southern extension area, including extant planning Condition 29, which in accordance with the Noise Consultant's recommendation would control noise levels attributable to normal operations, so that it does not exceed the noise levels stated in the table below, when measured free-field at any of the stated locations.

Location	Recommended Site Noise Limit at Residential Dwellings dB LAeq,1h (free-field)
R1 (Balderton Grange Farm)	52
R2 (Cowtham House)	51
R3 (Shirebridge Farm)	51
R4 (Fen Farm)	50
R5 (Turnable Pike)	50
R6 (Willow Tree Farm)	50
R7 (Manor Farm Bungalow)	52
R8 (Balderton Grange Cottage)	52
R9 (17, Williams Lane, Fernwood)	55

429. The remaining extant planning conditions regulating noise emissions from the proposed development would continue to place controls over the following matters:
- Any timings of temporary works shall be recorded by the operator and must not exceed 8 weeks in any calendar year. The free-field noise level shall not exceed 70dB LAeq,1hr at any residential property.
  - The monitoring of noise and vibration shall be carried out in accordance with the approved noise and vibration monitoring scheme, and the results reported to the MPA.
  - Processing plant noise between the hours of 06:00-07:00hrs shall not exceed 42dB LAeq, 1hr as measured at the boundary of the site.
  - All plant machinery and vehicles used on the site is regularly serviced and appropriately silenced (in accordance with the manufacturers' instructions), to minimise noise emissions when operated.
430. The noise assessment demonstrates that noise emissions from the mineral extraction and temporary operations would not exceed Planning Practice Guidance levels.

431. It is concluded that residential amenity in respect of noise would not be adversely affected by the proposals, subject to planning conditions. The noise emissions from the development would not be intrusive and any impact would be less than significant. As such, the proposed development would accord with adopted MLP Policy DM1 (Protecting Local Amenity), and Policy DM5 of the Newark and Sherwood DPD; and the NPPF. The extended quarry is capable of being worked with noise emissions controlled to within environmentally acceptable limits.

#### Blasting effects

432. Policy DM1(Protecting Local Amenity) of the adopted MLP states that proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity, including that of blast vibration, are avoided or adequately mitigated to an acceptable level.
433. Paragraph 211 of the NPPF states that when considering proposals for mineral extraction, minerals planning authorities should ensure that any blast vibrations are controlled, mitigated or removed at source.
434. The supporting text to MLP Policy DM1 at paragraph 5.12 reiterates national policy, and states that in accordance with national policy, all mineral workings should ensure that any blasting vibrations are controlled, mitigated or removed at source.
435. Paragraph 013 of the PPG indicates that the environmental effects of blast vibration need to be considered, but does not give any specific guidance, either in terms of any assessment methodology or allowable limits (Paragraph: 013 Reference ID:27-013-20140306). In comparison, it is noted that the now archived Minerals Policy Guidance, MPGs 9 and 14, offered technical advice regarding acceptable ground vibration limits, of between 6 mm/s and 10 mm/s at 95 per cent confidence limit when measured at a sensitive property, with a maximum of 12 mm/s. This continues to be the accepted guidance when considering ground vibration limits in relation to sensitive receptors.
436. The use of controlled explosive charges is a necessary part of the operations at Bantycok Quarry to loosen the harder deposits of gypsum. It is highly controlled in terms of its application, with only two (the Cocks and Greys) of the seven gypsum seams requiring blasting due to their thickness, prior to mechanical extraction. The remaining gypsum seams together with the overburden and interburden, are removed by mechanical means. It is noted that the blasting operations at Bantycok quarry are moderated by the fact that there is no requirement to break rock away from the working face, unlike quarrying for some aggregates. There is only the need to fracture the gypsum so it can be lifted out by excavator. The blasting operations are therefore more limited in terms of their scope and application at Bantycok.
437. The process of blasting, involving the detonation of explosive charges in a borehole or 'shot hole', generates stress waves, the effect of which is localised,

causing localised distortion and fracturing of the rock seam. Beyond this immediate vicinity, permanent deformation does not occur.

438. Notwithstanding this, all blasting generates vibration, and if not properly controlled and regulated, the blast induced vibration has the potential to cause damage to property or structures, and a loss of amenity to residential receptors. Evidence suggests that it is not possible to design out vibration altogether, despite the detailed design process involved when determining the parameters of the blast itself, including the borehole diameter, its depth, spacing, and quantity of explosive. All blasts will generate vibration, which occurs both through the ground and through the air as a pressure wave.
439. A typical blast consists of several boreholes into which are placed explosive charges. Each borehole is detonated individually using a series of detonators, each with differing millisecond delays. Detonating explosives within a confined borehole generates stress (seismic) waves causing localised vibration, distortion or cracking. Even the most well-designed blasts generate this type of ground vibration, which then radiates away from the blast source, attenuating as distance increases. The widely accepted aspect of vibration that requires monitoring is the peak particle velocity (PPV), which is the maximum value of particle velocity in any stress wave, as it radiates out.
440. Representations from several local residents have raised concerns regarding the potential for significant blasting impacts arising from the proposals as quarrying activities move southwards and closer towards residential property to the south of Bantymock Quarry, including towards an adjacent farm and towards the village of Cotham. It is alleged that minor structural damage has already been caused to a property situated within the Great North Road, from existing operations and that moving blasting closer could potentially result in more damage. Concerns have also been raised by an adjacent farm (Willow Tree Farm), as to how far any gypsum loosened by blasting could reach, and that local amenity could be adversely affected by potential blasting tremors.
441. It is recognised that the involvement of blasting as a necessary component of the minerals operations at Bantymock quarry is a more contentious part of the mineral extraction operations for those nearest sensitive receptors to the site. There is a perception that it is a potential cause of structural damage to properties situated within the vicinity of the quarry.
442. It is recognised that if not properly regulated, blast induced vibration has the potential to cause damage to properties or structures and loss of amenity to residential properties in proximity to the quarry.
443. Accordingly, a quantitative assessment has been submitted as part of the ES in support of the application. It has sought to quantify the potential blast effects upon the nearest vibration sensitive receptors to the proposal site, and to demonstrate that blast induced vibration levels associated with working the proposed southern extension are capable of being kept to within acceptable limits. This assessment has also sought to identify a range of measures which

may be used, as required, to enable any identified impacts to be minimised and mitigated to acceptable levels.

444. Blasts Limit Zones for the proposed southern working area, based on achieving a 6mm/s PPV at 95% confidence level blast vibration limit, have been assessed, with consideration being given to the nearest vibration sensitive receptors to the proposed southern extraction site.
445. There are two applicable British Standards which cover blasting and, for the purposes of this assessment, the proposed blasting operations to the southern extension have been assessed against BS 6472-2:2008 and BS 7385-2:1993. Standard maximum vibration levels have been established to avoid property damage and general disturbance; and to mitigate the effect on local amenity in the vicinity of the proposed southern extension.
446. BS 6472-2:2008 sets out guidance on human exposure to blast-induced vibration inside buildings. Regarding residential amenity, when measured at a sensitive property, ground vibration limits of between 6mm/s and 10 PPV mm/s at a 95% confidence limit are considered acceptable for up to three blast vibration events per day during day-time hours (8am to 6pm Mondays to Fridays and 8am to 1pm on Saturdays). For offices and workshops, this goes up to 14.0 PPV mm/s at any time.
447. In accordance with BS 6472-2:2008, the assessment investigated the impact of blasting upon 'high sensitivity' residential receptors within the vicinity of the proposed southern extension and assessed whether vibration levels could be kept within the standard daytime levels of 6.0 to 10.0 PPV mm/s.
448. The other aspect that has been assessed, in accordance with BS 7385-2:1993, is that of blast induced damage to properties. This standard sets out guidance on vibration levels above which there is the potential for either cosmetic or structural damage to buildings. It is worth noting that very few cases of vibration-induced damage have actually been recorded in the UK, despite a significant review of relevant case histories, when compiling this particular standard. It is noted that the standard threshold has been set high, with both the vibration-induced damage thresholds and guide values being set to prevent more superficial cosmetic damage to property. This sets a high confidence level so that actual structural damage has been screened out.
449. In this respect, for both residential and light commercial buildings, a guide value of 15-20 mm/s is recommended for blast-induced impacts (vibration magnitudes) of between 4 Hz and 15 Hz, whilst a guide value of 50mm/s is set for vibration magnitudes above 40 Hz. It is noted that any blast-induced impacts (vibration magnitudes) would have to be felt at twice these values for any potential minor damage to occur, and four times these values for major damage. Acknowledgement is given to the fact that the established thresholds have been set significantly below the critical point at which structural damage to a building would be expected. It is noted that no damage has ever occurred in any of the published data at vibration levels of less than 12.7 mm/s PPV.



450. The criterion of 6.0mm/s PPV at 95% confidence level was established under extant planning permission 3/18/01723/CMA, in line with the County Council's Noise Engineer's recommendation, and in compliance with the lowest limits set in BS 6472-2:2008, to protect local residential amenity within the vicinity of the quarry.
451. BS 6472-2:2008 states that in order to predict the likely vibration magnitude from a blast, a set of measurements from one or more trial blasts should be recorded at a number of locations around the site. In accordance with this, the assessment has used real time data gathered from monitoring production blasts at the existing quarry. This is a valid indicator, given that the applicant/operator would continue to blast using exactly the same techniques currently in use at Bantycok. This is based on employing an agreed set of explosive maximum instantaneous charge weights.
452. Accordingly, following guidance in BS 6472-2:2008, an assessment of predicted blast-induced vibration levels has been undertaken in relation to nearby vibration-sensitive receptors. The predictions are based on 2,246 blast induced vibration events (production blasts) recorded over 3½ years, at various locations around the existing quarry site, as mentioned above. Using the measured data, a blast regression line was then plotted. This has established a set of maximum instantaneous charge (MIC) weights required to achieve the prescribed vibration limit of 6.0mm/s PPV at 95% confidence for those properties identified as being at potential risk from blast induced vibration. For example, to achieve this limit for the nearest vibration sensitive receptor, identified as VSR08, Balderton Grange Cottage, at a distance of 130m from the site, an MIC weight of 6.5kg would be required. It is noted that these figures are a conservative estimation, given that it is based on an assumption that the blast would be located on the actual boundary of the quarry working area.
453. The assessment demonstrates that the criterion of 6mm/s PPV at 95% confidence level is capable of being achieved by suitable blast design using the recommended instantaneous charge weights as guidance. It is therefore proposed that the results of the regression analysis (set out in the table below) be used to inform the blast design as mineral extraction moves southwards into the new extension. This provides confidence that all blasting activity that would occur as part of the extraction process in the southern extraction area is capable of achieving the accepted technical limit, subject to planning conditions.
454. Currently, Condition 23 of extant planning permission 3/18/01723/CMA places controls over this aspect of blasting and it is proposed to carry this forward to blasting operations in the southern extension. This condition would continue to place limits on blast-induced vibration at the nearest receptors to the quarry workings, to a maximum Peak Particle Velocity (PPV) of 6mm/s at a 95% confidence level. This would ensure that any such works would remain compliant with the lowest environmental limits set under the standard guidance BS 6472-2-2008. Based on extensive research around the world, this is a level that is significantly below that at which damage would be caused to properties, and at which residential amenity is protected.

Allowable maximum instantaneous charge weights

Vibration sensitive receptor	Approximate distance from the nearest blast location (m)	Predicted maximum instantaneous charge weight, kg to comply with 6mms-1 at 95% confidence level
VSR01 (Balderton Grange)	150	8.7
VSR02 (Cowtham House)	320	39.5
VSR03 (Shirebridge Farm)	580	129.7
VSR04 (Fen Farm)	520	104.3
VSR05 (Turntable Pine)	960	355.4
VSR06 (Willow Tree Farm)	610	143.5
VSR07 (Manor Farm Bungalow)	850	278.6
VSR08 (Balderton Grange Cottage)	130	6.5
VSR09 (St Michael's Church)	920	326.4
VSR10 (Askerton House)	530	108.3

455. It is noted that the County Council's Noise Consultant has not raised any issues from a perspective of blast effects and noise, subject to the extant planning conditions being suitably updated, carried forward and applied to the proposed southern extension.
456. In this respect, also recognised and of relevance to the proposed working of the southern extension are the existing planning conditions relating to blast induced vibration and in particular extant planning permission 3/18/01723/CMA which controls current extraction operations within the northern extension to the quarry and which has a suite of planning conditions which place controls over blasting. Extant planning conditions 21, 22, 23, 24, 25, 26 and 27 seek to ensure that blasting only takes place within the defined limit of extraction; that blasting only takes place between the hours of 1:30pm to 3:30pm Mondays through to Fridays; that blasts shall not exceed a maximum peak particle velocity (PPV) of 6mm/s at a 95% confidence limit when measured at the nearest residential property or indeed at any other receptor as identified and notified in writing to the developer by the MPA; that delays shall be employed between the detonation of each shot hole; that no surface laid explosive or detonating cord

shall be used; and finally that audible warning shall be given prior to each blast to any residential properties within 300m of the blast point.

457. Airborne vibration or air overpressure is also a critical aspect of blasting. Essentially this means that when blasting occurs, energy is transmitted from the blast site as airborne pressure waves at different frequencies, most of which are inaudible to the human receptor. These waves are experienced as a concussion or pressure, with air overpressure being a combination of this with sound. It is noted that the standard BS 6472-2-2008 indicates that there is no known evidence of structural damage to property having occurred in the UK as a result of air over pressure levels from blasting associated with mineral extraction.
458. To provide some sort of context to this, attention is drawn to the fact that the weakest part of most structures exposed to air overpressure tends to be that of windows. Those that are poorly mounted and pre-stressed have the potential to crack at 150 dB(lin). The standard BS 6472-2-2008 indicates that air overpressure levels measured at properties near quarries in the UK are generally around 120 dB(lin), which is actually 30 dB(lin) below the limit required for cracking pre-stressed poorly mounted windows. Putting this into further context, air overpressure levels of 120 dB(lin) are equivalent to the pressure generated by a constant wind velocity of 5m/s (Beaufort force 3 or a gentle breeze).
459. It is noted that meteorological conditions influence the intensity of air overpressure at any given location and that particular atmospheric conditions can cause localized enhancement of the air overpressure in a particular direction. In this respect, temperature inversions frequently occur morning and evening, as air and ground surface warm and cool at differing rates. To counter this, blasting at Bantycok Quarry takes place around mid-day. Wind is a further significant influence on weather, capable of resulting in a 10-15dB increase in sound level downwind, when compared to levels in either cross wind or no wind conditions.
460. The variance in overall weather conditions including atmospheric conditions means that the level of air overpressure being experienced tends to be outside the operator's control. In view of this, invariably the best means of limiting air overpressure is at source, through appropriate blast design, achieved by the experienced operators at Bantycok.
461. Attention is drawn to the fact that there are strict controls on the timing of blasting events and the assessment states that levels are well within the guideline levels and would not cause damage to property nor would there be significant effects to local amenity for those nearest sensitive receptors.

#### Neighbour Representations

462. Various concerns have been raised in neighbour representations with regards to blasting induced effects. These are addressed as follows:

463. It is acknowledged that another effect of gypsum extraction can be fly-rock which describes the unexpected projection of material from the blast site to any area beyond the designated safety area. Fly-rock occurs when the amount of explosive energy is greater than that required to break the mass of rock between the blast position and the free face; and the excess energy projects the rock debris beyond the safety area.
464. With regards to gypsum being loosened by blasting with explosives and how far this reaches, the applicant has confirmed that due to improvements in blast design technology, fly-rock incidents are extremely rare, with none having occurred at Bantymock Quarry.
465. The magnitude of vibration decreases with distance from the source of the blast. The ES provides analysis based on vibration levels measured at the quarry and as with the current operations, limits would be imposed on vibration levels measured at the nearest residential receptors. The design of each blast is based on these limits, with the knowledge of vibration levels measured within the quarry resultant from known quantities of explosive used. The extant planning permission under which the quarry currently operates, through extant condition 23, allows vibration levels of 6 mm/s at the 95% confidence level (i.e. this means that 95% of all blasts should be no greater than 6mm/s). This means that the maximum vibration level would be in the order of 10-12mm/s.
466. Planning conditions would be imposed to safeguard amenity from noise or vibration and the limits imposed are based on Government guidance and are mainly aimed at safeguarding both the amenity and well-being of local residents.
467. In terms of vibration, attention is drawn to the fact that vibration levels would be restricted at the nearest properties by limits on the allowable vibration levels at that property. Again, these levels, which are 6mm/s at the 95% confidence level, are much lower than those reported to cause cosmetic or structural damage. It is noted that considerable research has been undertaken regarding the effect to blast induced vibration, including the vibration levels required to cause damage to properties.
468. Attention is drawn to the fact that fears over vibration from blasting events being unsafe should be seen in the context of the typical strains a property experiences through daily environmental changes and domestic activities. In this context, as noted in the Institute of Quarrying publication, the 1987 USBM Report quotes that 'daily changes in humidity and temperature can readily induce strain of an order that is equivalent to blast induced vibration of between 30mm/s and 75mm/s'. Vibration levels of between 0.6mm/s PPV and 50.0mm/s PPV are routinely experienced in everyday life within a property and are considered to be wholly safe. It is apparent though that when similar levels are experienced through blasting operations it is not unusual for such a level to give rise to subjective concern.
469. Damage is more likely to be caused by a range of other issues for example fatigue and ageing of wall coverings; drying out of plaster finishes; shrinkage and swelling of wood; chemical changes in mortar, bricks, plaster and stucco;

structural overloading; and differential foundation settlement particularly after times of prolonged dry spells. Notwithstanding this, it is acknowledged that the properties on the Great North Road are closer to the existing permitted operations than any of those identified nearest residential receptors to the proposed southern extension.

470. A response from a residential property within the Great North Road states that the property is starting to show signs of structural cracking. The County Council does not have any demonstrable evidence to substantiate this allegation or claim. Attention is drawn to the fact that the MPA consistently monitors the extant planning permission, under which the quarry currently operates including the relevant extant planning conditions covering blasting. To date, the County Council has found no evidence to suggest that there has been any breach of the attached planning conditions. These particular extant conditions controlling blasting are considered by the County Council to be suitably robust, and compliant with the relevant environmental and technical standards to ensure that structural damage does not result to residential development within the vicinity of the quarry. The County Council therefore has no evidence to link the current blasting activities associated with mineral extraction at Bantycok Quarry with the alleged structural damage to the residential property within the Great North Road.
471. Finally, it is noted that vibration limits imposed at nearby properties are based on amenity factors and are well below the levels required to cause damage and as such, there would be no anticipated increase in insurance premiums as a result of the quarrying operations.
472. In conclusion, the assessment in conjunction with the responses from the County Council's Noise Consultant, the District Council and the County Council's Public Health Team does not indicate anything other than that the vibration associated with any blasting events would remain within the acceptable limits and would not exceed the acceptable PPV threshold of 6mm/s at a 95% confidence level already in place at the quarry. Subject to extant planning conditions being carried forward to the proposed southern extension, any blasting vibration and noise effects would be less than significant and would not impact residential amenity or properties of those nearest sensitive receptors to the southern extension. It is considered that it is neither a limiting factor nor a constraint to working the proposed southern extension.
473. Subject to planning conditions, including controls over the timing of blasting events which would be carried over from extant planning permission 3/18/01723/CMA, it is considered that these operations are capable of being undertaken in an appropriately controlled, safe and compliant manner. In terms of material impact on residential amenity and structural damage to property, the conclusions of the blasting assessment indicates that any impacts are capable of being suitably controlled to within acceptable levels subject to planning controls. As such, the proposals would accord with adopted MLP Policy DM1, Policy DM5 of the Newark and Sherwood DPD, paragraph 211 of the revised NPPF and the supporting PPG.

474. The MPA is satisfied that an effective monitoring regime is in place at Bantycok Quarry, and that this would be extended to the southern extraction site.
475. It is noted that vibration from blasting operations is routinely monitored and recorded by the applicant at various locations around the quarry using up to three seismographs. Periodically, members of the County Council's Monitoring and Enforcement Team attend to check it is being carried out correctly, and to check compliance with extant planning conditions covering blasting operations. All complaints are investigated by the County Council and it is noted that, to date, no such complaints have been found to be substantiated.

#### Air Quality/Dust

476. Policy DM1 (Protecting Local Amenity) of the adopted MLP states that proposals for minerals development will be supported where it can be demonstrated that any adverse impacts on amenity, including that of dust, are avoided or adequately mitigated to an acceptable level.
477. Paragraph 211 of the NPPF states that when considering proposals for mineral extraction, minerals planning authorities should ensure that any unavoidable dust and particle emissions are controlled, mitigated or removed at source.
478. The supporting text to MLP Policy DM1 at paragraph 5.12 reiterates national policy, and states that all mineral working proposals should ensure that any dust and particle emissions are controlled, mitigated or removed at source. Paragraph 5.13 states that proposals would also need to demonstrate that any development would not have an adverse impact on air quality from dust, plant or vehicle emissions. It supports the need for a dust assessment to determine the impacts during site construction, operation and restoration, including details of appropriate mitigation measures (for example, the use of dust suppression equipment, limiting on-site vehicle speeds and the temporary suspension of dust causing activities during favourably dry or windy conditions; monitoring in the event that dust generating activities are to be carried out close to neighbouring sensitive properties; and the use of site sweepers and wheel washing equipment to limit the spread of dust or mud off site).
479. Adopted MLP Strategic Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the built, historic and natural environment. The consideration of impacts will include effects on air quality.
480. The supporting text to MLP Policy SP5 at paragraph 3.60 states that minerals development can have an adverse impact on air quality from dust, plant or vehicle emissions, which could potentially adversely affect residential amenity. Air pollution could also potentially adversely affect ecosystems and biodiversity, especially where it could have an impact on sites designated for their biodiversity value. However, appropriate site management of mineral workings to control dust and emissions can minimise such impacts.

481. In terms of general amenity impacts, Policy DM5 of the Newark and Sherwood DPD states that development proposals should have regard to the impact on the amenity or operation of surrounding land uses and where necessary mitigate for any detrimental impact.
482. Paragraph 013 of the PPG states that the environmental effects of dust need to be considered, and it goes on to give specific guidance as to how mineral operators should seek to minimise dust emissions, in terms of a dust assessment study at paragraphs 023 to 028 (Paragraph: 013 Reference ID:27-013-20140306). Notwithstanding highly sensitive residential receptors to the proposal site, at paragraph 029 of the PPG, the guidance highlights that some environmental features may also be sensitive to dust (Paragraph:029 Reference ID:27-029-20140306). It is noted that this aspect has been incorporated into the current dust assessment.
483. Representations received from several near neighbours have raised concerns regarding the potential for increased dust particulates and pollution associated with the proposed development. In particular, there is concern regarding effects on air quality and the potential for this to have detrimental health effects, this being of particular concern to a local resident who is asthmatic.
484. With regards to dust impacts from minerals operations, it is recognised that quarrying activities including mineral extraction by blasting have the potential to generate significant levels of dust. Accordingly, an air quality assessment has been undertaken as part of the ES to determine the likely dust impacts at the nearest sensitive receptors from the proposed development.
485. The assessment has been carried out in accordance with the PPG and the Institute of Air Quality Management (IAQM) technical guidance, '*Guidance on the Assessment of Mineral Dust Impacts for Planning*'. This seeks to ensure that unavoidable dust emissions are controlled, mitigated or removed at source to meet the air quality standards. The potential impacts associated with dust deposition, in terms of its effect on residential amenity and sensitive ecological receptors, has been assessed.
486. The assessment has also considered the potential impact of suspended airborne dust, known as PM10s; and reviewed the existing dust control measures at the quarry site to identify whether additional controls are required. It is noted that as the proposed development would not generate any additional vehicle movements above the existing baseline environment, vehicle emissions have been scoped out of the assessment.
487. The assessment was based on a technique known as the source-pathway-receptor concept, in line with the IAQM's technical guidance.
488. The potential for adverse dust emissions to the atmosphere from extraction and restoration activities associated with developing mineral extraction in the proposed southern extension, as well as continuing to operate within the existing quarry, and the magnitude and significance of these impacts has been assessed using this technique. The assessment has considered potential

significant environmental effects that the proposed development would have on the baseline environment; the mitigation measures required to prevent, reduce or offset any identified significant adverse effects; and the likely residual impacts post mitigation measures being implemented.

The IAQM guidance requires an assessment to be carried out for those receptors located within 250 metres of a gypsum quarry.

489. Seventeen receptors are considered representative of the local area for the purposes of assessing dust and PM10s. All the identified receptors are considered of high sensitivity to dust amenity impacts; and are set out in the table below.

Summary of High Sensitivity Receptors

Ref.	Description	Approx. distance to the existing permitted boundary (m)	Approx. distance to the proposed southern extension boundary (m)	IAQM Sensitivity
DR1	Balderton Grange	215	Within	High
DR2	Balderton Grange Cottage	490	40	High
DR3	Askerton House	2,290	500	High
DR4	Cowtham House	75	270	High
DR5	Shirebridge Farm	500	530	High
DR6	Fen Farm	935	520	High
DR7	Willow Tree Farm	1,515	580	High
DR8	Airfield Cottages	280	895	High
DR9	Balderfield Cottage	570	1,170	High
DR10	The Grange	1,000	800	High
DR11	Inglewood Close	135	1,800	High
DR12	Ainsdale Close	180	1,680	High
DR13	Bilton Close	175	1,860	High
DR14	Youngs Avenue	280	1,700	High
DR15	Fernwood Business Park	140	1,275	High



DR16	The Suthers School	85	1,060	High
DR17	Cotham	2,110	740	High

### Ecological Receptors

490. As well as the above receptors, ecological receptors have also been considered within this assessment. In line with the IAQM guidance regarding non-statutory ecological sites, these sites are all identified as being of 'low' sensitivity.
491. Evidence suggests that only dust deposition levels above 1000mg/m<sup>2</sup>/day are likely to affect sensitive ecological receptor, with most species appearing unaffected until dust deposition rates are at levels considerably higher than this. It is noted that this level of dust deposition is approximately five times greater than the level at which most dust deposition starts to cause a perceptible nuisance to the community. As such, ecological receptors are considered to be of comparatively low sensitivity.
492. Three sensitive ecological receptors have been identified for the purposes of this dust assessment and all are of 'low' IAQM sensitivity. These receptors are set out in the table below.

### Summary of Ecological Receptors

Ref.	Description	Approx. distance to the existing permitted boundary (m)	Approx. distance to the proposed southern extension boundary (m)	IAQM Sensitivity
EC01	Staple Lane Ditch LWS	20	200	Low
EC02	Grange Lane Drain LWS	40	500	Low
EC03	Cowtham House Arable LWS	300	1,240	Low

493. The assessment has focused on those areas within the existing quarry that would continue to remain active during the extended time limit (until 2044), namely the processing area and access road; and also the proposed activities within the proposed southern extension. The IAQM screening distance of 250m has been applied to receptors in relation to their distance to the nearest active area. This represents a conservative approach as the active, dust generating activities would vary spatially, depending on the actual cut being worked.
494. The identified receptors have been assessed in accordance with the IAQM criteria. It is noted that this is based on the distance of the receptor to the nearest active area together with the frequency of potentially dusty winds. For the purposes of this assessment, the nearest dust sensitive receptors are

identified as being DR1 (Balderton Grange) and DR2 (Balderton Grange Cottage), and with regards to sensitive ecological receptors EC03 is identified.

#### Summary of dust effects

495. The magnitude of effect arising from potential dust deposition at each receptor has been estimated. The dust impact risk at the two ecological receptors ECO1 and ECO3 is considered negligible. It is noted that this conclusion reiterates the pre-pandemic 2019 dust monitoring records, which indicate that dust deposition levels at the site boundary are well below the 1,000mg/m<sup>2</sup>/day level considered likely to affect sensitive ecological receptors.
496. Notwithstanding this, it is acknowledged that NWT raised concerns regarding Cowtham House Arable LWS, given the potential sensitivity of the arable weeds for which the LWS is designated to the effects of dust. It is noted that the LWS would not be directly affected by the development and no direct loss of habitat is anticipated. The assessment has also concluded that the proposed buffer of 23m separating the topsoil bund and the LWS, combined with dust mitigation measures, would reduce the likelihood of adverse impacts on the arable weeds. NWT is satisfied that the applicant's commitment to a monitoring survey for rare arable plants annually, together with remedial action if they are impacted, has resolved their concerns regarding the potential for negative dust impacts on the LWS. Subject to a planning condition requiring an annual monitoring survey and remediation strategy, it is considered that the effects of dust on the LWS would be less than significant, in accordance with adopted MLP Policy SP5.
497. In terms of the two identified nearest residential receptors DR1 and DR2, both of which would be situated within relative close proximity to the proposed active areas of the southern extension, a slight adverse effect is predicted. However, it is noted that these results are based on a worst-case scenario, by which it is assumed that the whole of the southern extension area would be a potential dust source at any one time. Whilst this worst-case scenario has been assessed, it is recognised that it is unlikely to occur in practicality, given that activities would be phased, with different timings, and of varying duration.
498. It is noted that the approved dust suppression measures, currently in operation at Bantycok, would continue to be implemented at the proposed extension. In addition, there is an effective monitoring and complaints procedure in place, under a Dust Management Plan (DMP). Subject to extant planning conditions controlling these dust mitigation measures being carried forward to the proposed southern extension, it is considered less than likely that any slight adverse effects would occur.
499. The assessment has demonstrated that the nearest sensitive receptors to dust effects have been appropriately considered within the proposed phasing plan put forward by the applicant for the working of the proposed southern extension area. It is noted that in terms of its design, the proposed working area would include a stand-off distance of 157m. This has been incorporated into the

working scheme for receptors DR1 and DR2 and when taken together, the overall effect of the proposed development is considered to be 'not significant'.

#### PM10s and the Regulation 25 submission

500. It is noted that the UK Health Security Agency (UKHSA) (formally Public Health England) has neither raised an objection to the proposed development or to the findings set out in the air quality assessment contained within the ES. They have, however, put forward their position with regards to PM10s, which the applicant has sought to address in the Regulation 25 submission.
501. In this supplementary response, the applicant has reiterated the findings of the air quality assessment. Attention is drawn to the fact that regarding PM<sub>10</sub>, the recommended value for screening purposes is 17ug/m<sup>3</sup>, which accords with the IAQM guidance and supporting evidence provided by the Minerals Guidance Working Group. The assessment states that with respect to PM<sub>10</sub>, the maximum predicted background concentration in the area would be 16.9ug/m<sup>3</sup>, with this figure being given as the annual mean for the proposed commencement year of 2024. This figure is lower than the recommended screening value of 17ug/m<sup>3</sup>. The assessment has concluded that, given that the predicted PM<sub>10</sub> background concentrations are below 17ug/m<sup>3</sup> at the nearby receptor locations, there is minimal risk of the contribution from the proposed southern extension causing an exceedance of the PM<sub>10</sub> AQALs. The overall effect of the proposed development on PM<sub>10</sub> concentrations in the local area is therefore considered to be 'not significant'.
502. The assessment has also concluded that with respect to short-term impacts, the calculated number of days where PM<sub>10</sub> concentrations are likely to exceed 50ug/m<sup>3</sup> (as a 24-hour mean) is predicted to be limited to 1 day per calendar year. This part of the assessment has been carried out in accordance with the Defra TG.16 methodology, and falls far short of the permitted 35 days.
503. The air quality assessment has identified and set out a comprehensive range of appropriate dust control measures which accord with best practice guidance and are already in place at the existing site; and have shown to be effective; and are proposed to be carried forward to cover the working of the proposed southern extension.
504. It is noted that the air quality assessment has considered public exposure to PM<sub>10</sub> and its risk assessment findings have clearly demonstrated that there are no predicted exceedances of air quality standards. Subject to the extant planning conditions covering dust control measures and those control measures proposed in the Dust Management Plan being extended to cover the workings in the proposed southern extension, the assessment has demonstrated that there is a low risk of Air Quality Standards (AQS) being exceeded. The assessment clearly indicates that the air pollution from any proposed and existing site operations is capable of being managed through existing mitigation measures.

505. The additional details provided by the Regulation 25 submission are noted and it provides further information around the management of air pollution from site operations and cites guidance with regards to the low risk of AQS being exceeded. Notwithstanding this, it is recognised that the UKHSA's position remains that of supporting a reduction in public exposure to non-threshold pollutants, such as particulate matter, below AQS because of the potential public health benefits. In this respect, an ongoing reduction in air pollution remains important even when AQS exceedances are not likely to occur.
506. It is noted that the UKHSA is in agreement with the findings of the assessment regarding the low risk of AQS being exceeded as a result of air pollution from site operations. Overall, there are no predicted exceedances in the standards of air quality. As such, it does not seem unreasonable to conclude that both the approach and findings set out in the air quality assessment seemingly accord with UKHSA's stated position regarding this matter. It is noted that whilst several receptors would be closer to the proposed new working area than current operations, there is nothing to indicate that there would be public exposure to unsafe levels of air pollutants nor that local residents' health would be directly affected.
507. It is considered unlikely that the quarrying operations would lead to the AQS for PM<sub>10</sub> being exceeded, and all the indications point to the fact that the proposed quarrying operations would continue to comply with guidance in terms of controlling particulate and dust emissions. The assessment has demonstrated that any particulate and dust emissions associated with the proposed development, would have a less than significant effect on the standard of air quality.
508. It is noted that the dust sensitive residential receptors identified within this assessment have been considered and recognised by the applicant within the proposed phasing plan put forward for the southern extension area. In this respect, the proposed working area has been designed to include a stand-off distance of 157m which has been incorporated into the working scheme for receptors DR1 and DR2.
509. The site operates under an active and comprehensive Dust Management Plan (DMP) which incorporates dust control measures, dust action planning, dust monitoring, complaints procedures and control responsibilities. These controls include the use of water bowsers and sprays to control dust, the sheeting of lorries, defined haulage routes with a maintained surface dampened as necessary, the site speed limit being adhered to; dampening of surface restoration areas as necessary; suspension of operations in extreme wind; bunding used effectively, with bunds seeded as soon as is practicable with minimal mechanical disturbance; and the progressive restoration of the site to minimise exposed areas.
510. In support of the current application, the DMP has been updated and revised to incorporate the proposed working scheme to cover the proposed southern extension and to cover the extended time limit for operating the on-site processing plant. Planning conditions would ensure that the updated DMP is

secured for the proposed extended quarry operations/activities and to ensure that the dust management plan remains relevant and fit for purpose for the duration of the proposed works.

511. The air quality assessment has concluded that there would not be any significant residual effect resulting from the proposals subject to the continuation of the existing dust control methods. Planning conditions would seek to ensure that these measures, as updated by the DMP, are secured and remain in place for the duration of the works.
512. The conclusions of the air quality assessment are that the effect both on amenity and on PM10 concentrations at sensitive receptors is considered to be 'not significant' subject to extant planning conditions covering dust impacts being carried forward and remaining in place for the duration of the extended time limit and the working of the proposed southern extension. The overall residual impact of the proposals on PM10 levels, suspended dust and deposited dust is considered to be insignificant. Finally, the effect from dust on ecological receptors are considered to be 'not significant'.
513. It is indicated that there would be no significant effect on human health from fine dust particles, PM10s, and that air quality would remain well within the national air quality standards. With regards to amenity effects from deposited dust, the overall significance is predicted to be negligible in accordance with IAQM guidance at all receptor locations subject to a range of existing dust control measures remaining in place for the duration of mineral extraction within the proposal area, as well as incorporating environmental design measures into the scheme. It is noted that there are no consultee objections on environmental or public health grounds from either the public health authorities (UKHSA and NCC (Public Health)) or the pollution control authorities (Environmental Health and the EA).
514. Planning conditions, as updated and carried over from the extant planning permission, would continue to place suitable controls over dust emissions. Whilst there are public objections on dust, it is concluded that subject to mitigation measures, dust is capable of being suitably controlled, and the overall effects on residential amenity and air quality are negligible. As such, the proposed development would be compliant with adopted MLP Policies SP5 and DM1, Policy DM5 of the Newark and Sherwood DPD, and the NPPF and supporting PPG.

#### Ecological Impacts

515. Adopted MLP Policy SP2 (Biodiversity-Led Restoration) states that restoration schemes that seek to maximise biodiversity gains and achieve a net gain in biodiversity, in accordance with the targets and opportunities identified within the Nottinghamshire Local Biodiversity Action Plan, will be supported. Where appropriate, schemes will be expected to demonstrate how restoration will contribute to the delivery of Water Framework Directive objectives. Restoration

schemes for allocated sites should be in line with the relevant Site Allocation Development Briefs contained within Appendix 2.

516. In this respect, for Bantymock quarry south, allocated under Policy MP7c, Strategic Policy SP2 is embedded into the Brief. In line with this, the policy direction is clear in that it states that all proposals for restoration schemes should be in line with the County Council's approach to Biodiversity-Led Restoration contained within Policy SP2. It identifies the priority habitats and directs that '*restoration should seek to maximise the extent of target habitat(s) and avoid habitat packing, where small areas of lots of habitats are packed into the site*'. Instead, proposals should '*focus on maximising the biodiversity benefits from larger areas of priority habitat*', with priority given to wetland/open habitats rather than woodland. In terms of those environmental designations potentially contained within the proposal site, the policy Brief states that the restoration scheme would have to demonstrate that the loss of the LWSs, namely Cowtham House Arable LWS and Shire Dyke Balderton South LWS, could be outweighed by the greater than County need for the development, and that high quality habitat, at least equal to that which would be lost, is capable of being established and maintained in the long term.
517. In terms of justification for this policy approach, supporting text at paragraph 3.16 reflects on the Environment Bill (now the Environment Act 2021), through which 'biodiversity net gain' will become mandatory by 2023. This promotes the concept of embedding biodiversity net gain into all development. Paragraph 3.27 states that Local Biodiversity Action Plan (LBAP) priority habitats in areas of gypsum extraction should reflect the identified habitats naturally occurring in the vicinity.
518. Adopted MLP Policy DM12 (Restoration, aftercare and after-use) states that where proposals for the after use includes habitat creation, applicants will be required to demonstrate how the proposals contribute to the delivery of LBAP targets and have regard to the biodiversity-led restoration approach and the opportunities identified in the National Character Area profile.
519. The supporting text to this policy at paragraph 5.125 states that achieving high quality restoration must be integral to any proposals for minerals development.
520. Adopted MLP Policy DM4 (Protection and Enhancement of Biodiversity and Geodiversity) states that the County's biodiversity resources will be enhanced by ensuring that minerals development retains, protects, restores and enhances features of biodiversity and provides for appropriate management of these features, and in doing so contributes to targets within the Nottinghamshire LBAP and provides for net gains for biodiversity.
521. Paragraph 174 of the NPPF states that planning decisions should contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity. It further states that development should, wherever possible, help to improve environmental conditions such as air and water quality.

522. An Ecological Impact Assessment (EclA) has been submitted as part of the ES in support of the proposals. It has sought to evaluate the importance of the ecological resources present in the proposed extension area; assessed the significance of potential effects resulting from the proposals and drawn up mitigation strategies to address potential ecological impacts. This have been supplemented through the Regulation 25 submissions to address concerns raised by Nottinghamshire Wildlife Trust and the Environment Agency regarding the adequacy of the original ecological survey and impact assessments, submitted in support of the planning application and to provide sufficient information to enable an informed judgement to be made regarding the magnitude of ecological effects from the development and the appropriateness of the mitigation measures being proposed.
523. It is noted that no statutory nature conservation sites would be affected by the proposed development. Two non-statutory Local Wildlife Sites (LWS) are situated within close proximity to the site and have the potential to be affected by the development. However, it is considered that provided the mitigation included within the ecological impact assessment is fully implemented, no significant impact is anticipated on Cowtham House Arable LWS subject to appropriate planning conditions. Shire Dyke LWS would suffer unavoidable direct impacts from the quarrying works, involving approximately 580 metres of the western spur being lost to the development. However, it is noted that this section of the LWS has been found to be largely dry and it does not contain LWS qualifying features; and that the loss would be compensated through the enhancement of another section of dry non-LWS ditch (600 metres long) situated nearby, which is an approach considered acceptable by the County Council's ecologist. It is noted that habitat enhancement of an existing dry ditch that connects to Shire Dyke could potentially provide additional compensatory habitat if conditions in the ditch can be created to allow aquatic plant communities to develop.
524. Within the proposed southern extension area, habitats have been identified as being of negligible or low ecological value, given that the land is arable/agricultural land. However, it is noted that whilst hedgerow habitat on the proposal site is species-poor, it does nevertheless provide a network of corridors that would be used by a variety of small mammals and birds and is of local importance. Consequently, the restoration scheme includes replanting species-rich hedgerows together with other mitigation measures, that would result in a beneficial impact at the local level. Planning conditions would seek to ensure that these measures are secured and implemented.
525. The assemblage of birds within the proposed extension area is typical of the range of habitats present in this type of rural landscape. However, several of the bird species recorded breeding within the survey area are identified as birds on the Nottinghamshire Birds of Conservation Concern list and therefore the bird assemblage is considered to be of value at a county level (cuckoo, song thrush, yellow wagtail, skylark, linnet, and yellowhammer). It is noted that a total of thirty-three species were recorded breeding on the application site, of which six are Red Listed and four Amber Listed. With the exception of Cuckoo, these are all generally widespread (albeit declining) species.

526. With appropriate mitigation, alongside the proposed restoration and timing of vegetation clearance, no significant impact is anticipated on these species, again subject to planning conditions.
527. A series of mitigation measures and strategies are already in place at the existing quarrying. These measures include regular (every 5 to 6 weeks) ecology site inspections by an ecologist, a protected species monitoring programme and a reptile mitigation strategy; and it is proposed that these monitoring activities would be applied to the proposed southern extension. Extant planning conditions would be updated and carried forward to secure these mitigation measures and strategies in relation to the proposed southern extension.
528. Enhancement measures would include the creation of reptile hibernacula and the installation of bat and bird boxes and log piles within the woodland, which would have a positive effect on biodiversity and encourage species to colonise once restoration has been completed. Again, these would be secured by planning conditions.
529. It is noted that NWT has raised concerns regarding incomplete data on protected species, however, the applicant considers this not to be the case. The applicant acknowledges that a small strip of land in the north of the proposal site, within the red line boundary, was not surveyed during the Extended Phase 1 Habitat Survey, due to boundary changes after the survey work had been completed. However, the applicant's ecologist has confirmed that there is existing data regarding this area. It has been identified that birds, including skylark and meadow pipit, are breeding in this area and all mitigation measures that apply to the rest of the site, would also be applied here. A reptile monitoring survey was also undertaken in 2021 around the existing Bantycok site and no reptiles were found in the area to the south of the existing quarry, as has been the case since monitoring surveys commenced, albeit that a small population of grass snake does exist to the north of the existing quarry.
530. Despite grass snake having never been recorded south of the existing quarry, vegetation clearance for the southern extension would be carried out following the existing approved vegetation clearance method statement for Bantycok. Essentially, this would mean that all clearance would be undertaken outside the bird nesting season and would also apply the same precautionary approach already adopted for reptiles. This established strategy would be implemented across the whole of the proposed extension site. It would be undertaken under ecological supervision, only in suitable weather conditions, and would include destructive searches. These methods are outlined in the EclA and in the vegetation clearance method statement. Extant planning conditions would again be updated and carried forward to the proposed southern extension.
531. Whilst it is acknowledged that NWT has maintained its objection to the planning application raising a number of concerns regarding a lack of adequate survey information and incomplete impact assessments and consequently a lack of appropriate mitigation to compensate for a loss of habitat, the County Council's ecologist has confirmed that the scope of the supporting ecological impact



assessment survey is appropriate and that whilst a small part of the site was omitted from the surveyed area, this is similar in character to the remainder of the site. Consequently, it is considered that this omission is unlikely to affect the results and conclusion of the ecological assessment.

532. The County Council's ecologist, the NWT and the EA have all advised that the biodiversity value of the large lake proposed as part of the site restoration should be increased as part of these proposals. In response to this, the applicant states that due to the method of working and progressive restoration there is insufficient volume of overburden and restoration materials to reduce the size of the lake or enhance its marginal habitat further to the north and east. However, in an attempt to overcome these concerns, the applicant has proposed to increase the amount of marginal habitat to the south-west by making the margins more irregular and providing an increased number of smaller islands. It is confirmed that a draft of this would be made available for consultees prior to commencement of the development. Planning conditions would be attached to any planning permission to ensure that this requirement is met.
533. In response to concerns raised by NWT regarding the need for early implementation of mitigation particularly in relation to Shire Dyke, Balderton South LWS, an initial habitat creation and enhancement method statement has been submitted as part of the Regulation 25 information. This has sought to define the initial habitat creation and enhancement works, which would provide immediate or early mitigation and compensation for the loss of the 580m section of the Shire Dyke, Balderton South LWS, which as already stated would be lost as a direct result of operational activities associated with the development. Whilst there is an overall scheme of proposed ditch creation with regards to the wider Bantycok restoration involving a series of new ditches that are proposed to be created on the site on completion of restoration in advance of the section of LWS being lost, a length of dry ditch connecting to Shire Dyke would be enhanced as compensation for this. In addition, several new sections of ditch would also be created as part of the initial works and these would interconnect with Shire Dyke in the south-west of the site, including a section of sinuous ditch in the south-western corner of the site.
534. New ditch habitat which is proposed to be created within years 0-3 would total 2,370m in length and the actual ditch enhancement work, which would directly compensate the partial loss of Shire Dyke, Balderton South LWS, would provide a further 755m in length. In terms of biodiversity, this represents a 539% increase in ditch habitat for the loss of the LWS section.
535. Initial works are those that would be created or enhanced within Years 0-3, or Years 3-6 of the southern extension being approved. Planning conditions would seek to ensure that the detailed methodologies for planting and monitoring ponds, species-rich grassland, woodland and hedgerows are secured. Planning conditions would ensure that the existing Restoration Management Plan is comprehensively updated to encompass both the existing quarry and the proposed southern extension. The method statement has also included further information as sought by NWT, regarding the initial phases of woodland, pond,

and rich grassland creation, the initial ditch creation and enhancement, and the hedgerow conservation management scheme.

536. The broad aim of these initial habitat works is to increase biodiversity within the site. To achieve this, the ditch to be enhanced would be re-profiled, including dredging and de-silting where necessary and ensuring one bank is sloped at a 45 degree angle to encourage water vole colonisation, with the other bank containing inundated ledges to facilitate colonisation by marginal plants. In terms of the planting methodology, ditches would be interlinked with those existing around the site such as Shire Dyke which contains a variety of aquatic and marginal plants. This would have the potential to facilitate the colonisation of the newly created ditches within the proposed extension site via natural regeneration; and is the preferred method. The establishment of the newly created ditches would be underpinned by an inspection by a suitably qualified ecologist of the section of Shire Dyke LWS due to be lost and the salvaging of any aquatic vegetation, prior to the section of ditch being lost.
537. Planning conditions would seek to ensure that the management and monitoring of the establishment of ditch habitat would take place in accordance with an updated version of the Restoration Management Plan. In terms of these details, this would include the managing of ditch habitat by excavation and cutting, the monitoring of mink and water vole; and the monitoring of the ditch vegetation for composition, and invasive and non-native species.
538. NWT propose that a multi-channel ditch/small watercourse twice the length of the section that would be lost should be created. In response, the applicant has drawn attention to the fact that there are no other suitable ditches that could be enhanced within the site. However, it is considered that proportionate compensatory mitigation has been put forward, as it is proposed that the new section of ditch, (referenced on the proposed restoration masterplan), which lies to the west of the ditch due to be enhanced, is to be created in advance of the extension area being worked and the section of LWS being lost. The enhancements and creation of the new section of ditch would allow for a total length of approximately 250m of ditch being specifically designed as compensation for the lost section of the LWS. Both the ditch creation and the ditch enhancements would be undertaken prior to the site being worked.
539. NWT have requested that due to there being a net loss of hedgerows and hedgerow trees as a result of the proposed extension that commitments should be made to enhance retained hedgerows so that they are better able to support breeding birds that are being displaced from the habitats that would be lost. A loss of arable field margins is also referred to by NWT, however, it is pointed out that the site has very few field margins due to the nature of the farming practices on the site and the crops being sown right up to the hedgerow edges. Therefore, figures quoted about the estimated amount of arable field margins that would be lost are considered to be grossly overestimated by NWT, and not an accurate reflection of local arable farming practices.
540. Current proposals for hedgerows already include enhancing the existing perimeter hedgerows by filling gaps and diversifying species composition. The

western hedgerow, which has been largely lost over time with only approximately 35% remaining, would be replanted over its 1020m length and this work would be carried out in advance of the site being worked. However, in terms of enhancing the proposed mitigation measures, further consideration has been given to this matter, and in terms of the outcome, it is stated that further recommendations would be made to the tenant farmer. In this respect, the cutting regime of the existing hedgerows that would be lost should be relaxed with immediate effect, to allow them to grow broader and taller and provide additional habitat for displaced birds. It is noted that further details of this would be provided in the CEMP or in a similar document to be agreed which would be submitted for approval prior to commencement of the development. Planning conditions would seek to secure this undertaking given by the applicant.

541. Due to the way the application site is proposed to be worked, the majority of the habitat creation must be undertaken post-development. Notwithstanding this, it is proposed that restoration of the southern part of the site (currently an arable field) which is not due to be worked, would be undertaken in advance of the proposed site being worked. In this respect, this would involve the planting of 7.6 ha of wildflower meadow and 4.6 ha of native woodland planting that would be created in advance and it is considered that this would provide some mitigation for displacement of breeding birds, foraging bats and brown hare. However, it is acknowledged that there would be the unavoidable loss of habitat and displacement of some species of bird from the application site during working. Whilst not in the same area, it does reflect a comment from a local resident who suggested that a strip of land adjacent to Grange Lane on the western side of the site should be set aside for tree planting, habitat creation and landscape improvements at the start of quarrying operations.
542. The EA have stated that they have a more recent record of water vole within 1km of the site on Shire Dyke than was obtained from the Nottinghamshire Biological and Geological Records Centre during the desk study, and are concerned about the development's effects upon water vole. Water vole are not currently present within the site boundary and have not been recorded on the Bantycok site since 2008. The protected species monitoring programme that is proposed for the southern extension would include biennial water vole monitoring surveys of all ditches in the proposed extension, alongside the surveys that already take place for the existing quarry to the north. Further pre-construction water vole surveys for all ditches due to be lost would also be undertaken prior to their removal. Further details of this would be provided in the CEMP or in a similar document to be agreed, which would be submitted for approval prior to commencement of the development. Planning conditions would seek to secure this.
543. As stated within the environmental assessment, significant amounts of new ditches that would be specifically designed for water vole would be created within the scheme as a whole upon restoration. A target which has been set in the existing management plan is for water vole to recolonise the site. A method statement for ditch creation that has already been developed for this for the existing quarry would be updated to include ditch habitat creation measures proposed in the southern extension. Again, planning conditions would seek to

ensure that the implementation of these mitigation and enhancement measures is carried out.

544. In terms of the relevant site allocation development brief contained within Appendix 2 of the MLP, it states that the proposed restoration scheme should be in line with the County Council's approach to Biodiversity-Led Restoration contained in MLP Policy SP2. Whilst it is recognised that restoration is dependent on both landform and substrate characteristics, priority habitats for the Bantycok quarry south allocation could include calcareous grassland (on drier areas); floodplain grazing marsh/seasonally wet grassland (on lower areas); marsh and swamp; reedbed; lowland mixed deciduous woodland; wet woodland; hedgerows; ditches and ponds. Other attributes are that any restoration scheme should seek to maximise the extent of target habitats and avoid habitat packing whereby small areas of lots of habitats are packed into the site. Proposals should instead focus on maximising the biodiversity benefits from larger areas of priority habitat, and priority should be given to wetland/open habitats rather than woodland.
545. In this respect, it is considered that the applicant has sought to identify and maximise the extent of those target habitats and the scheme has avoided multiple, low-level habitats or habitat packing in line with this policy brief. The proposed restoration scheme is considered to have met these objectives, as it encompasses a more selective number or range of larger-scale habitats, whilst also being inclusive in terms of delivering identified and appropriate compensatory habitat and enhancement mitigation measures. It has sought to recognise the constraints of the site, whilst maximising meeting these objectives. Restoration involving the return of land to agriculture and nature conservation corridors should complement the approved restoration scheme for the existing quarry to the north, and the Staple Quarry Landfill to the west. In this respect, the overall restoration of the northern part of the quarry has been comprehensively re-worked and amended in light of the proposed southern extension to create a more cohesive final restoration of the gypsum quarry.
546. The proposed habitats are considered appropriate for the Trent and Belvoir Vales National Character Area. In terms of environmental designations, the environmental assessment is considered to have demonstrated that the partial loss of the Shire Dyke Balderton South LWS has been appropriately mitigated and compensated for, through the proposed restoration scheme. On balance, it is considered that the ecological loss is outweighed by the greater than County need for the development, in terms of delivering a high quality mineral resource and given that high-quality habitat, of equivalence to that which would be lost, is capable of being established and maintained in the long term. As such, it is considered that the proposal is compliant with adopted MLP Policies SP2 and MP7c and the development brief.
547. As part of the Regulation 25 submission, a Biodiversity Net Gain assessment has been undertaken for the proposed southern extension of Bantycok Quarry and this has been compared against the baseline scenario of the existing approved quarry development and the approved restoration.

548. The calculation has shown that there would be a net biodiversity gain through the proposed restoration scheme and that the gains capable of being achieved in the revised scheme are higher than those achieved under the current approved scheme.
549. In terms of the Biodiversity Net Gain assessment, it has been considered that the value of the existing area habitats present prior to any quarrying commencing at the site to be 724.4 units. It is noted that this would be the equivalent value to land in arable production or modified grassland (improved pasture), which would represent the two main habitat types which are typical of this landscape prior to quarrying. It is noted that there are limitations to the pre-quarrying baseline (for the northern part of the quarry) in that it does not include any small-scale habitats that may have been present prior to the commencement of quarrying and therefore this figure may be an actual under estimation of the total. The baseline assessment also does not consider either the length or condition of existing hedgerows, i.e. the linear habitats. Therefore, the existing value does not fully represent the actual value of the existing area habitats in its totality.
550. The Biodiversity Metric 3.0 assessment has given a value of the current approved restoration scheme of 908.31 units, which represents a substantial gain of 25% even taking into account the precautionary assumption that habitat creation would be delayed until 15 years after quarrying has commenced. It is noted that the approved restoration scheme assumes that the area of the proposed southern extension would remain in arable production and also that 11.5 km of new hedgerows are proposed under the scheme.
551. Metric 3.0 assesses the value of the proposed revised restoration scheme to be 1046.15 units, a substantial gain of 44% from the baseline conditions with no quarry and a predicted increase of 137.84 units above the current approved restoration scheme. This is also taking into consideration that the revised quarry restoration also adopts the precautionary assumption that habitat creation would be delayed until 15 years after quarrying has commenced. New hedgerows proposed under the restoration scheme have not been included in the calculations, as linear features, nor have the loss of hedgerow been factored in because of the limitations of the methodology.
552. In terms of comparing the two schemes based on the quantitative losses and gains of habitats the indications are that the proposed southern extension would provide additional biodiversity benefits, a net gain, above the existing consented scheme. Whilst there are limitations in terms of the approach adopted, it nevertheless demonstrates that a net gain for biodiversity would materialise upon cessation of quarrying and the restoration of the site.
553. The County Council's ecologist has reviewed the Biodiversity Net Gain (BNG) calculations in light of the concerns raised by Nottinghamshire Wildlife Trust (NWT). The MPA acknowledges that both the 'Original Restoration' and 'Revised Restoration' calculations cover the same area (which includes the southern extension area) in order that a direct comparison can be made between the BNG which is to be delivered through the existing approved

restoration plan (for the planning permission for the northern extension) and the BNG which the new restoration plan seeks to deliver through this application. For this reason, the southern extension area has been included in the 'Original Restoration' calculations, albeit as retained (unworked) habitat.

554. NWT states that the losses of 4km of hedgerows and several lengths of ditch have not been entered into the calculator. It is acknowledged that all linear habitats have been omitted from the BNG calculations and that this is a limitation or constraint on the assessment. Notwithstanding this, the County Council's ecologist is satisfied that the BNG calculation has been carried out properly. It is noted that the BNG calculation was carried out to allow the two restoration schemes to be compared (i.e. the original approved restoration scheme vs the scheme proposed through this planning application). This has demonstrated that that biodiversity net gain above the (yet to be mandatory) 10% figure can be achieved, and that the new scheme is an improvement over the previous scheme in terms of BNG.
555. NWT also objected to the proposed 15 year aftercare period and pointed to the metric itself stating that this would not be a sufficient enough period of time for the proposed habitats to fully establish.
556. To overcome NWT concerns, and in light of the recently adopted Nottinghamshire Minerals Local Plan Policy SP2 – Biodiversity-Led Restoration which supports restoration schemes that seek to maximise biodiversity gains and achieve a net gain in biodiversity, whilst the net gain calculations demonstrate a net gain in biodiversity, the MPA considers that these gains could be maximised as a result of extending the length of the proposed aftercare period.
557. The net gain calculations have clearly demonstrated that the proposed restoration for the southern extension is well above the requirement for a 10% biodiversity net gain, specified under the Environment Act 2021, under the 15 years of aftercare originally proposed by the applicant. However, in order to maximise those gains in line with the development brief, the applicant has agreed with the County Council's ecologist to increase the length of aftercare, as considered necessary to deliver a 'good condition'. It is noted that the BNG calculations set the target condition to 'moderate' which is capable of being achieved in 15 years of aftercare. The County Council's ecologist has recommended aftercare of 20 years for the 'sparsely vegetated land' or 'shingle marginal habitat' shown on the restoration plan, to reach 'good condition'. It is noted that woodland would achieve 'good condition' in 30 years, and all other habitats would achieve 'good condition' within the already proposed 15 year aftercare. As such, subject to planning conditions securing the extended aftercare period for certain habitat types within the restoration scheme, the proposal delivers on the policy requirement of maximising biodiversity net gain through the proposed restoration, in compliance with Adopted MLP Policies SP2 and MP7c, and the site development brief.
558. Over the longer term, post restoration, it is concluded that the proposed restoration scheme would reverse the adverse impact of the extraction phase

and be beneficial for local wildlife, subject to planning conditions controlling the development to ensure high quality restoration is delivered. The magnitude of the biodiversity net gain of the revised restoration scheme compared to the approved scheme, as evidenced from applying the Biodiversity Metric calculator 3.0, has clearly demonstrated that there would be ecological gain across the site following restoration. Intensively managed agricultural farmland would substantially be replaced by a more diverse and ecologically valuable habitat across the southern extension and the wider site.

559. It is noted that NWT have maintained their objection to the planning application, but the MPA is satisfied that the applicant has sought to address their concerns through the Regulation 25 submissions, as set out in the paragraphs above. Furthermore, these concerns are not borne out by the other Conservation Organisations (the County Council's Ecologist and Natural England) neither of which have raised objections regarding the proposed development. The development satisfies the ecological policy requirements set out within MLP Policies SP2, DM4, MP7c and the accompanying development brief, and the NPPF, delivering biodiversity net gain and maximising the quality of the restoration, bringing its component elements to a 'good condition' through an extended aftercare period agreed by the applicant. Provided the relevant upfront mitigation is adhered to there would be no significant negative impacts from this development and with appropriate mitigation, subject to planning conditions, it is considered that the restoration scheme being put forward by the applicant would produce a significant beneficial impact.

### Archaeology

560. Adopted MLP Strategic Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the built, historic and natural environment. The consideration of impacts will include effects on heritage assets (designated and non-designated) and their setting and other cultural assets.
561. The supporting text to MLP Policy SP5 at paragraph 3.53 states that mineral extraction by its very nature can destroy archaeological sites and features. However, where sites are properly investigated and recorded, it can provide major opportunities to understand the county's rich archaeological heritage and what it says about the past. Paragraph 3.56 reiterates national policy highlighting that heritage assets are an irreplaceable resource and that they should be conserved in a manner appropriate to their significance. Attention is drawn to the fact that where development would directly or indirectly affect non-designated heritage assets, planning decisions will need to have regard to the scale of any harm or loss and the significance of the heritage asset.
562. Adopted MLP Policy DM6 (Historic Environment) states that proposals for minerals development will be supported where it can be demonstrated that there will not be any harm to the significance of the designated, or non-designated heritage asset of archaeological interest equivalent to a scheduled monument,

and/or its setting. Proposals likely to cause harm to a designated or non-designated heritage asset, as above, will only be permitted where it can be demonstrated that there are public benefits which outweigh the level of harm or loss, relative to the importance of the heritage asset affected. Proposals that would directly or indirectly affect non-designated heritage assets will be assessed according to the scale of any harm or loss and the significance of the heritage asset. Proposals for minerals development on a site of archaeological importance must ensure that satisfactory mitigation measures are incorporated, including the preservation in situ or the excavation and recording of any affected archaeological remains.

563. It is noted that the role of MLP Policy DM6 is to ensure that the historic environment is afforded the appropriate level of conservation and enhancement in conformity with national policy.
564. Paragraph 194 of the NPPF requires that applicants provide suitable information to determine the impact of proposals on heritage assets, including non-designated archaeological assets. It is noted that the information accompanying the application is now considered adequate for the requirements of the NPPF with regards to describing and assessing impacts on the potential archaeological assets within the proposed southern extension site. The approach has been followed as set out in the relevant paragraph of the NPPF. It is considered that the desk-based archaeological assessment submitted as part of the ES in support of the planning application together with the Regulation 25 submissions by way of an Archaeological Management Plan has been appropriate, sufficient and proportionate in meeting the requirements of NPPF Paragraph 194.
565. It is noted that before archaeological significance can be understood, the potential for archaeology needs to be assessed. In the northern part of Bantymock quarry, archaeological evaluation prior to gypsum extraction has revealed exceptional preservation of an Iron Age settlement and a range of fabric, which has the potential to make the overall site nationally significant. At Bantymock quarry to date, excavation to uncover and recover the remaining significance of the site before it is potentially lost to mineral extraction is considered to be the most effective way of managing the long-term risks to the archaeology, and this would continue to be the case moving forward into the proposed southern extension.
566. Integral to the current quarrying operations at Bantymock, a phased archaeological excavation has been taking place to the north and north-east of the proposed southern extension site with the results revealing a complex Iron Age and Roman landscape, with early phases of settlement indicating a sparsely populated middle Iron Age agricultural landscape, becoming Romanised in the 1<sup>st</sup> and 2<sup>nd</sup> century AD. Investigations so far have identified two foci of settlement activity, approximately 400m and 650m north of the proposal site, surrounded by a landscape of fields, enclosures, boundaries and outlying buildings. The Iron Age roundhouses and enclosures are overlain by more Romanised features, including an irregular octagonal enclosure thought to have a ritual purpose. Many of the boundaries have been re-cut, indicating a



prolonged occupation and use, with artefacts recovered ranging from the mid-Iron Age to the late Roman period. Features and artefacts have been recorded including handmade jars of a previously unknown form, dating from the mid to late Iron Age, with the gradual Romanisation of the community observable in the changing landscape and the introduction of imported and occasional fine wares to the artefactual record as well as harder fired, wheel thrown, locally made pottery which is typically introduced in the Romano-British period. The majority of the features recorded have domestic or agricultural functions, including stock keeping and crop processing and storage, with the surrounding field system also supporting the keeping of livestock with wide tracks through the field system defined by deep ditches indicating droveways or traps. The evidence is that this is part of a wider agricultural landscape of scattered farmsteads and small settlements, with a shift in the pattern of the landscape in the later Roman period and a cemetery of this period also being identified with associated possible ritual or religious features.

567. It is considered highly likely that the Iron Age and Roman landscape made up of scattered settlements and an associated widespread agricultural countryside, as revealed within the existing quarry, will extend into the proposed extension area.
568. In terms of a synthesis of archaeological potential in relation to this planning application, it is noted that excavations at the existing Bantycok Quarry have revealed an extensive Iron Age and Roman landscape, which considering the cropmark evidence appears to extend southwards into the proposed quarry extension. The excavations so far have shown that there are multiple foci of settlement associated with an extensive agricultural landscape, with continuous activity from circa 500BC well into the Roman period. Lying close to the River Trent ford in the Iron Age and the Roman Fosse Way, this area would have been very accessible in this period, lying close to several Roman forts.
569. The desk-based assessment of archaeological potential has brought together the available archaeological, historical, topographical and land-use sources to assess the likely potential and significance of any heritage assets within, or in the vicinity of, the proposed quarry extension. On the basis of these findings, it is considered that the site has high potential for archaeological remains of both the Prehistoric and Roman periods; low potential for the Mediaeval period; and low to moderate for the post-Mediaeval period and finally, moderate potential for the Modern period.
570. In the context of NPPF Paragraph 194, the overall assessment has effectively characterised the archaeological interest of the proposed development site. From this, the significance of the heritage assets can be assessed and an informed view developed as to the impact of the proposed development on that significance, which is sufficient to make a planning determination in accordance with the adopted MLP and the NPPF.
571. It is noted that archaeological remains are not all equal in significance. In the respect of this application, the archaeological assets are categorised as non-designated heritage assets, however, the indications arising from the

archaeological assessment point to the fact that the potential archaeological assets in the southern extension are of greater significance than this.

572. National Planning Policy Guidance provides guidance in terms of defining non-designated heritage assets of archaeological interest and how to define their importance. PPG paragraph 041 provides more details to this, stating that three types of non-designated heritage assets fall into this category including two that may be applicable in this case, i.e. those that have yet to be formally assessed for designation; and those that are incapable of being designated by virtue of being outside the scope of the Ancient Monuments and Archaeological Areas Act 1979 because of their physical nature.(Paragraph: 041 Reference ID: 18a-041-20190723).
573. Paragraph 26 of the Historic England's Advice Note 13 'Mineral Extraction and Archaeology' states that many nationally important heritage assets of archaeological interest are known but not scheduled, exemplified by 'Sites of Early Human Activity'. It is noted that the importance of non-designated heritage assets of archaeological interest which are demonstrably of equivalent significance to scheduled monuments may on occasion only be discovered through evaluation or mitigation works. In accordance with the NPPF paragraph 200 (and footnote 68) these archaeological assets should be treated in the same way as a scheduled monument. In this respect, the level of significance accorded to any heritage asset is arrived at through an 'assessment of significance' which informs the approach taken when considering potential impacts, in line with paragraphs 199-202 of the NPPF.
574. In this respect, high importance is attached to the archaeological assets of the proposed southern extension and whilst these are identified as non-designated heritage assets, their significance is considered such that they merit consideration subject to the national policies for designated heritage assets. In terms of their assessment, the staged investigations that have taken place across the northern part of the quarry together with the archaeological assessment of these findings, have facilitated a level of understanding as to the significance of the anticipated archaeological assets in the proposed southern extension. It is also understood that the County Council's archaeologist considers that the non-designated heritage assets of archaeological interest in the context of the southern extension and the wider setting have equivalence to designated heritage assets. This is informed by what has been discovered on the northern extent of Bantymock quarry, and the fact that this site is located just beyond the former WWII airfield, so the archaeology would potentially be better preserved than in the existing quarry. It is noted that significance is influenced by the state of preservation of the archaeological remains.
575. The northern part of the quarry has unearthed findings of considerable interest. It is recognised as being a site of archaeological importance, and there is the potential for unearthing greater finds within the proposal site compared to the north.
576. On balance, the evidence indicates that the proposed southern extension to Bantymock Quarry has the potential to contain archaeological assets of

equivalence in importance to scheduled monuments, and as such, it is considered proportionate to apply the NPPF's policy on designated heritage assets, as set out under paragraphs 199 to 205.

577. NPPF paragraph 199 states that when considering the impact of a proposed development on the significance of a designated heritage asset, great weight should be given to the asset's conservation, and the more important the asset, the greater the weight should be.
578. In assessing the application, in terms of balancing and reconciling the needs of the historic environment and the proposed minerals development which are significant material considerations, NPPF paragraph 200 is considered relevant. It states that any harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction, or from development within its setting), should require clear and convincing justification. It identifies that substantial harm to or loss of assets of the highest significance, notably scheduled monuments, should be wholly exceptional<sup>68</sup>.
579. In the footnote to this policy (Footnote 68), it makes clear that non-designated heritage assets of archaeological interest, which are identified as being demonstrably of equivalent significance to scheduled monuments should be considered in the context of this policy. Similarly, reiterating national policy, adopted MLP Policy DM6 states that proposals for minerals development would be supported where it can be demonstrated that there would not be any harm to the significance of the designated heritage asset of archaeological interest equivalent to a scheduled monument. It gives further direction stating that proposals likely to cause harm to a designated heritage asset, would only be permitted where it can be demonstrated that there are public benefits which outweigh the level of harm or loss, relative to the importance of the heritage asset affected. Proposals for minerals development on a site of archaeological importance must ensure that satisfactory mitigation measures are incorporated, including the preservation in situ or the excavation and recording of any affected archaeological remains.
580. It is noted that mineral extraction by its very nature can destroy archaeological sites and features, but that heritage assets are an irreplaceable resource and as such should be conserved in a manner appropriate to their significance.
581. It is recognised that the proposed southern extension quarrying by its very nature would inevitably result in some degree of harm to the heritage assets, which could potentially range from the deterioration of the state of preservation to complete destruction. The archaeological significance would undergo a level of disturbance and there is the potential for harm and it is noted at NPPF paragraph 199 irrespective of whether that harm is substantial, total loss or less than substantial harm to its significance, great weight is given to the asset's conservation. Evidence provides that long-term preservation in-situ is unlikely to be a suitable mitigation option for this site, with excavation and recording being more appropriate in this case. The submitted Archaeological Management Plan identifies that to ensure that buried features that might otherwise be destroyed by extending the opencast quarry are identified and recorded, a scheme of

phased archaeological strip, map and record excavation is proposed. The purpose of the archaeological mitigation is to preserve by record archaeological remains that would otherwise be destroyed by mineral extraction, and to recover artefactual/ecofactual remains that would help to establish the character and dating of any heritage asset encountered in the stripped areas. Obligations for the applicant to carry out a comprehensive scheme of investigation before extraction commences, and during the extraction operations, would be applied through planning conditions imposed on the planning permission.

582. In terms of assessing the proposals in the context of NPPF paragraph 200, it makes clear that any harm to, or loss of, the significance of a designated heritage asset, from its alteration or destruction requires clear and convincing justification. Similarly, adopted MLP Policy DM6, indicates that minerals development would be supported where it can be demonstrated that there would no harm to the significance of the designated heritage asset, which is of archaeological interest equivalent to a scheduled monument. Where harm is likely to be caused to a designated heritage asset the proposed development can only be supported where it can be demonstrated that there are public benefits which outweigh the level of harm or loss, relative to the importance of the heritage asset affected.
583. The assessment has identified archaeological potential and that the proposed development might cause harm to the significance of a heritage asset of equivalence to a scheduled monument. However, it has been demonstrated that there are the means by which the harm is capable of being reduced to an acceptable level and one which is proportionate and reflective of the significance of the potential archaeological assets. However, in the context of both NPPF paragraph 200 and adopted MLP Policy DM6 there is harm nevertheless and to comply with these policies, clear and convincing justification must be demonstrated and in terms of MLP Policy DM6 this must demonstrate that public benefits outweigh the level of harm or loss, relative to the importance of the heritage asset affected.
584. In this respect, in terms of setting out a clear and convincing justification for the inevitable harm to, or loss of, the significance of a designated heritage asset (from its alteration or destruction), in terms of the planning balance, it is noted that a steady, adequate and sustainable supply of minerals is essential to the nation's prosperity, infrastructure and quality of life and that great weight should be given to the benefits of the proposed mineral extraction, including to the economy, in line with the NPPF. The identified mineral resource in the southern allocation is of national importance, being of the highest-grade gypsum and is only found and worked in this part of the country. This particular allocation provides a long-term supply of mineral, which is able to reinstate the fifteen year landbank at Bantymock and guarantee future production at the existing quarry and its sister plant at the nearby Jericho Works, as well as support production plants at East Leake, and regionally to the works in Leicestershire and Staffordshire. Minerals are finite and irreplaceable resources that can only be worked where they occur; and this constraint is recognised and adds great weight to the proposed mineral extraction in the proposed southern extension. However, it is recognised that archaeological remains are a finite and

irreplaceable resource; and that they are, by their very nature, highly fragile and vulnerable to damage and destruction, and that such impacts could potentially erode the significance of a non-designated archaeological asset of equivalent significance to a scheduled monument and that significant weight must be given to this.

585. Paragraph 202 of the NPPF states that where a development proposal will lead to less than substantial harm to the significance of a designated heritage asset, this harm should be weighed against the public benefits of the proposal including, where appropriate, securing its optimum viable use.
586. Paragraph 205 of the NPPF states that Local Planning Authorities should require developers to record and advance understanding of the significance of any heritage assets to be lost (wholly or in part) in a manner proportionate to their importance and the impact, and to make this evidence (and any archive generated) publicly accessible. However, the ability to record evidence of our past should not be a factor in deciding whether such loss should be permitted.
587. On balance, it is considered that the public benefits of the proposed development outweigh the level of harm or loss, relative to the importance of the archaeological assets. These public benefits would involve those associated indirectly from the mineral extraction itself, in terms of securing a vital, high-grade mineral resource (one which is used in a range of health/medical products and for construction purposes). More directly, with regards to the potential heritage assets, the development would facilitate a properly investigated and recorded archaeological assessment of the local area providing a major opportunity to understand the county's rich archaeological heritage and what it reveals about the past. It is noted that it is through the process of post-excavation analysis, publication and archiving, that the greatest added-value and wider public benefits come to bear, where there is a wealth of data for the public to refer to. Other work may be carried out to deliver public benefits, for example direct outreach, public engagement and dissemination of information more widely; it is understood that the relatively small cost involved is usually far outweighed by the benefits accrued.
588. It is noted that the Written Scheme of Investigation (WSI) for post-permission mitigation would set out precisely what archaeological works are to be undertaken, their scope and methodology, as well as plans for public engagement and the post-excavation, reporting, archiving and dissemination requirements. The quantity of proposed post-determination works is considered proportionate to the assets' significance, and the benefits of the development for archaeology are now clearly stated and considered achievable by the County Council's archaeologist. It is acknowledged that an active, more proactive approach has been adopted in the scheme of archaeological mitigation for the southern extension, and this should afford more opportunity for community engagement. The WSI would also meet the requirements of the NPPF at paragraph 205.
589. Overall, it is considered that subject to planning conditions securing the archaeological mitigation, the development proposal would lead to less than

substantial harm to the significance of a designated heritage asset, and that this harm should be weighed against the public benefits of the proposal. Great weight is given to the archaeological asset's conservation, in line with NPPF paragraph 199, and it is considered that the level of conservation delivered by this development in terms of heritage assets is appropriate and proportionate to the significance of these assets. It is considered that the proposed development is capable of complying with NPPF paragraphs 200 and 202, and adopted MLP Policy DM6 and that having taken into consideration the public benefits of the proposed development these do outweigh the level of harm, or loss, which is less than substantial subject to mitigation, relative to the heritage assets.

590. Adopted MLP Strategic Policy SP5 states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on designated and non-designated heritage assets. In the context of this policy, it is acknowledged that the County Council's archaeologist has in agreement with the applicant's archaeologist sought to maximise the potential of this site going forward. A new method of working is being proposed. Essentially, this new approach would be more investigative, and research focused, caveated by reporting the findings on a more regular basis.
591. The County Council's archaeologist is satisfied that the recording of the archaeology in the existing quarry has been exemplary in undertaking landscape scale recording of the Iron Age and Roman features and there is the potential to build on this. It is recognised that the nature of the extraction process, with a phased approach to operations over fifteen years, and extending to many hectares, offers the potential for the mitigation strategy to take on a landscape approach, in which analysis would be elevated to a level above individual sites and where research objectives and methods can evolve in the light of previous results on the northern extraction site. In this respect, it is considered that this adds weight in terms of justifying the inevitable harm to and loss of that archaeological asset's significance which is identified as having the equivalence of a scheduled monument.
592. It is noted that the agreed approach regarding mitigating the archaeological implications of the development involving a risk-based Archaeological Management Plan (AMP), capable of dealing with unexpectedly significant discoveries, and able to identify the measures required for each phase of the extraction process. There is also scope for recording and reporting practices, involving detailed individual phase Written Schemes of Investigation (WSIs).
593. In terms of the post-determination and operational phases, the County Council's archaeologist advocates a sound, research-led (question-led) mitigation strategy to ensure that the resources spent on archaeological works are appropriate and proportionate, and are directed at maximising information gain, the dissemination of information and the delivery of public benefit. As the quarry has a long operational life, it is important that results of evaluation and recording works are published according to a suitable and realistic timeframe. It is also important that as each phase of recording/mitigation takes place, the research questions and the methodology are reviewed so that the works can adapt or

change focus depending on what archaeological material is actually present on site. An underlying principle is to ensure all work stays targeted and focuses only on the work necessary to address the key questions, which may change as remains and finds assemblages are excavated. The use of an AMP and WSIs together with a research-led framework would ensure that post-permission mitigation would establish precisely what archaeological works are to be undertaken, their scope and methodology, as well as plans for public engagement and meeting the post-excavation, reporting, archiving and dissemination requirements.

594. In terms of dealing with the archaeology, discussions have been held between the County Council's archaeologist and the applicant's archaeologist to overcome the long-term, large-scale nature of the extraction site in the north-eastern part of the site, to overcome the significant challenges that have arisen in terms of reporting, making sense of and providing access to what amounts to substantial amounts of archaeological data, and using this to better inform the approach to be applied to the proposed southern extension, where better preservation (and hence significance) is anticipated in terms of the archaeological assets. In terms of designing the programme of post-determination archaeological investigation and post-excavation analysis and reporting, it is considered that a high-quality and creative approach has been developed by the County Council's archaeologist which reflects the significance of the archaeological assets associated with the proposed southern extension to Bantymock.
595. In this respect, planning conditions would ensure that a Research Framework and Agenda (RFA) and corresponding Archaeological Management Plan (AMP) are put in place for the southern extension. This combined approach would seek to define and prioritise specific archaeological assets for site investigation and determine achievable and deliverable outcomes. The research framework itself would link into that of the East Midland Historic Environment giving it a broader regional context. It would establish a framework for prioritising archaeological investigative themes and establish scientific sampling and carbon dating priorities. The Archaeological Management Plan would provide focus in terms of methodology and scientific and dating techniques, together with provision for reporting and establishing a public programme. Flexibility would be built in, to adapt to any unexpected discoveries. A written scheme of archaeological investigation (WSI) would be put in place for each phase or cut to ensure the effective implementation of both the research framework and the archaeological management plan for that cut. Overall, subject to planning conditions, the proposed development of the southern extension to Bantymock would be compliant with adopted MLP Strategic Policy SP5, and the mitigation scheme would ensure it is flexible enough to deal appropriately with any unforeseen archaeology and deliver the highest outcomes for the site.

### Heritage

596. Adopted MLP Strategic Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high

standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the built, historic and natural environment. The consideration of impacts will include effects on heritage assets (designated and non-designated) and their setting and other cultural assets.

597. The supporting text to MLP Policy SP5 at paragraph 3.55 states that mineral extraction may affect the setting of heritage assets, including buildings, landscapes or places and extraction can cause change in the character of the landscape. Furthermore, at paragraph 3.56, it reiterates national policy highlighting that heritage assets are an irreplaceable resource and that they should be conserved in a manner appropriate to their significance. Attention is drawn to the fact that where development would directly or indirectly affect non-designated heritage assets, planning decisions will need to have regard to the scale of any harm or loss and the significance of the heritage asset.
598. Adopted MLP Policy DM6 (Historic Environment) states that proposals for minerals development likely to cause harm to a designated or non-designated heritage asset, will only be permitted where it can be demonstrated that there are public benefits which outweigh the level of harm or loss, relative to the importance of the heritage asset affected. Proposals that would directly or indirectly affect non-designated heritage assets will be assessed according to the scale of any harm or loss and the significance of the heritage asset. Where relevant, the enhancement of the historic environment, including individual heritage assets or historic landscapes, will be encouraged.
599. The supporting text to Policy DM6 at paragraph 5.85 states that the role of Policy DM6 is to ensure that the historic environment is afforded the appropriate level of conservation and enhancement in conformity with national policy.
600. MLP Policy MP7c Bantycok quarry south site allocation development brief states that 'direct and indirect impacts on heritage assets at Balderton Grange and Cowtham House should be considered'.
601. As well as the adopted MLP Policies SP5 and DM6, of particular relevance to the built heritage is paragraph 203 of the NPPF, which states that the effect of an application on the significance of a non-designated heritage asset should be taken into account in determining the application. In weighing applications that directly or indirectly affect non-designated heritage assets, a balanced judgement will be required having regard to the scale of any harm or loss and the significance of the heritage asset.
602. Paragraph 194 of the NPPF states that in determining applications, local planning authorities should require an applicant to describe the significance of any heritage assets affected, including any contribution made by their setting. The level of detail should be proportionate to the assets' importance and no more than is sufficient to understand the potential impact of the proposal on their significance.
603. The planning application is supported by a Heritage Impact Assessment (HIA), as part of the ES and further submissions under the Reg. 25 process, which



have not fundamentally changed the overall conclusions of the HIA. The assessment has sought to quantify the significance of impact to 'heritage assets' (both designated and non-designated heritage assets) including their settings. In determining the application, consideration is required with regards to the scale of any harm or loss and the value of the heritage asset affected. It is identified that there would be no significant indirect impacts to heritage assets in the wider locality of the application site, with the impacts being concentrated on the two historic farmsteads of Balderton Grange and Cowtham House. The proposals directly affect two non-designated heritage assets, and in terms of the historical context, Balderton Grange is named on pre-Victorian maps (Sanderson's Map, 1835) and has the potential to be of considerable heritage interest with likely monastic connections.

604. It is noted that the proposals do not require the removal/demolition of either of the two non-designated heritage assets, however, the quarrying would come close to both and would impact on the setting of what are identified heritage assets. In national planning policy terms, the MPA is required to consider the scale of any harm or loss and value of the heritage assets in determining the application. Of particular relevance is paragraph 203 of the NPPF, which directs the Local Planning Authority to weigh the harm to the significance of a non-designated heritage asset and provide for a balanced judgement, as well as ensuring that the understanding of the significance is recorded appropriately.
605. A supplementary heritage impact assessment, submitted under the Reg. 25 process, has investigated the origins and anticipated impacts of the proposed extension to Bantycok Quarry on these buildings. Attention is drawn to the fact that the archaeological potential for the Balderton Grange site would be subject to the planning conditions covering the site's archaeology, as set out in Appendix 1 of this report.
606. In terms of their heritage significance, both Cowtham House farm and Balderton Grange farm are post-mediaeval farms that are an inherent part of the historic arable landscape south of Balderton. It is noted that Balderton Grange, which is a post-mediaeval farmstead actually situated within the redline extension site has a provenance stretching back to the mid-14<sup>th</sup> Century, when it was first documented. There is evidence of pre-enclosure buildings at Cowtham House suggesting it may have been a feature of the late mediaeval landscape. However, in terms of its current historical status, it is noted that Cowtham House is no longer a working farm and many of the buildings in the complex have been converted for residential occupation or associated business use. Thus, the integrity of its historic character has already been degraded and its heritage significance is considered to be 'low'.
607. Historically Balderton Grange may have been associated with a mediaeval grange, although this is yet to be established. Whilst the heritage assessment has recorded no evidence of mediaeval activity or buildings, it is noted that such evidence may be exposed during future excavation in the proposed extension site which may uncover its potential as a mediaeval grange.

608. It is noted that the historical agricultural character of Balderton Grange is largely extant today. Whilst the later post-mediaeval dwelling and adjacent outbuildings remain in use, post-mediaeval farm buildings to the northeast have been replaced in the 20<sup>th</sup> century with new barns and stores. The farm is owned by the applicant and tenanted.
609. It is noted that the visual setting of Balderton Grange is largely intact, albeit with updates to the farm and the wider landscape during the 20<sup>th</sup> Century. In terms of the visual assessment, there are no apparent views of the quarry from the farmhouse by virtue of the scale of the interceding buildings; from Grange Lane there are glimpses of the farmhouse through the trees, with the farm buildings beyond and no quarry in this vista. Similar views are recorded from the PRow along the disused railway line to the west of Grange Lane. From within the complex, the intermittent traffic along Grange Lane, a locally busy road, adds to the background noise of the quarry workings. When viewed from the south, a 4m high screen mound or bund around the southern boundary of the quarry prevents any views northwards into the opencast quarry itself. However, the quarry alarms and occasional vibration from the blasting at the quarry are both experienced at the farm. The addition of the quarry to the landscape is a progression of quarries around Balderton Grange since the early 20<sup>th</sup> century when the first large-scale gypsum quarries were opened on the western side of Grange Lane.
610. The heritage impact assessment indicates that the heritage significance of Balderton Grange is considered to be low, based on the currently available information.
611. Impacts from the development would be limited to indirect changes to the settings of both Cowtham House and Balderton Grange, with no direct impacts to either heritage asset. Cowtham House lies entirely outside of the redline application site, whilst Balderton Grange and its immediate gardens, albeit located within the redline application site, is excluded from the opencast extraction/quarrying area.
612. It is noted that the historic relationship of the complex of buildings which constitute Cowtham House, in terms of its historic relationship with the surrounding fields, has already been changed by the change of use of the former farm to domestic residences and workshops; albeit that this historic relationship between the farm and the arable fields remains appreciable even in the current environment.
613. The 4m high screening bund around the existing quarry is not visible from the primary aspects of Cowtham House or Cowtham House Cottage, but it is noted that a similar screening bund around the quarry extension would be more visible from the Cowtham site, introducing a new element into a relatively flat landscape of enclosed farmland that is the backdrop to the former farm. However, whilst views from the upper storey of Cowtham House looking westwards would include intermittent views of the proposed screening bund, ground level views from Cowtham House would remain unchanged.

614. The presence of this screening mound would prevent views into the open cut of the quarry and assist in the reduction of noise and dust that could potentially be experienced at Cowtham House farm; this would be in place for the duration of the extraction phase in the proposed extension which is anticipated to be around 15 years. The changes to the wider landscape setting of Cowtham House would therefore be of medium-term duration, and the screening bund would be removed as part of the final restoration of the quarry at the end of the extraction phase.
615. The extension of the quarry in terms of the landscape around Cowtham House would not significantly change the character of the landscape given that there has been mineral extraction to the south of Balderton throughout the last century with operations shifting around the area as the supply in each quarry is exhausted. The agricultural character of the landscape to the south of the former farm would remain unchanged and the overall impact of the extraction phase of the proposed southern extension on Cowtham House and the associated former farm buildings and workshops is considered to be 'minor'.
616. Whilst Balderton Grange lies within the redline boundary of the proposed southern extension, the proposals do exclude the immediate curtilage of the working farm, the small field (circa 9.5 acres) north of the farm buildings and part of the field (circa 6 acres) to the south, thereby retaining a small margin of the farmland that presently lies around the farm. There would be no changes resulting from the proposed extension to the relationship between the farmhouse and the barns within this area.
617. The boundary of Bantycok Quarry currently lies 250m north of the Balderton Grange farm complex whilst the extension boundary would lie on the field boundary that currently separates the fields to the east of the farm from the main farm complex, immediately adjacent to this heritage asset. This boundary represents the base of the 4m high screening mound/bund, which is proposed to surround the southern extension, thus dividing the farm from the arable farmland that surrounds it to the east (this land has been historically mined in the mid-20<sup>th</sup> century). Only the small remaining plots to the immediate north and south and the land on the west side of Grange Lane would remain to give the farm some context.
618. The proposed screening bund would be both a physical and visual barrier in the landscape, and one that is immediately adjacent to the farm. Consequently, all views east from Balderton Grange would be severed together with views north and south which would also be changed with the addition of the mound/bund. The anticipated changes in terms of the experience of being at Balderton Grange or when viewing the farm from the public vantage point afforded by Grange Lane would give it a sense of being enclosed rather than connected with the landscape. However, in mitigation, the bund would screen views from both the farm and Grange Lane into the opencast quarry extension.
619. The design of the phasing of the cuts of the proposed extension would result in the increased proximity between Balderton Grange and the working cut for the first 4 phases. However, once the open quarrying progresses into cut 5, which

is anticipated to be within five years of the southern extension becoming operational, then the open quarry works would have progressed far enough south to be at least the equivalent distance to the closest operation in the existing quarry.

620. Based on this, the overall impact of the proposals during the extraction phase of the quarry operations are considered to be 'moderate'.
621. It is noted that the proposed restoration scheme following completion of the extraction phase (which would be implemented on a phased incremental basis) would create a biodiverse habitat, with lake and seasonal wetland, with an area of land in the north-western corner adjacent to Balderton Grange, returned to arable agriculture. This does reflect a significant change in terms of the character of the proposal site, which is currently characterised by enclosed arable/agricultural land with fields of irregular size and shape, relatively consistent with the post-mediaeval landscape setting of both Cowtham House and Balderton Grange Farm.
622. It is noted that at Balderton Grange, the relationship between the working farmstead and the surrounding arable/agricultural fields has remained relatively consistent, since the enclosure of the fields in the late 18th century. It is considered likely that the farmstead itself also dates from this period and may have originated as a tithe barn or outlying grange farm in the mediaeval period, in a landscape of cultivated and appreciably agricultural land. It is noted that the proposals to significantly reduce the scale of arable land adjacent to Balderton Grange would negatively impact on the significance of this non-designated heritage asset. Given that the long-term change to the landscape would be permanent, this would inevitably result in 'moderate' impacts to Balderton Grange.
623. During the extraction phase of works within the quarry extension there are few other mitigation measures that can be implemented; the works are by their very nature destructive and impact on the surrounding area despite the designed screening mound/bund. The designed phasing plan of the cuts would ensure a methodical and gradual progression of phased extraction and restoration across the extension site, ensuring that at any one time the source of the noise and dust would be localised to one area only rather than dissipating out across the entirety of the site. The impacts from the extraction phase are also finite; it is anticipated that mineral extraction within the proposed extension site would be complete within 15 years. Therefore, the impacts to the settings of the heritage assets would cease when both phased extraction and restoration landscaping are complete.
624. Regarding Cowtham House, the surrounding arable fields to the south and northwest are outside the planning application site boundary and would therefore be unaffected directly by the proposed development. Therefore, in terms of the changes to the character of this area, it is unlikely to significantly impact on this heritage asset or the understanding of its setting as experienced from the property. The impact of the proposed restoration is considered to be 'minor', particularly as the farmstead has been converted to domestic dwellings

and workshops, which has already altered the relationship between what is now a former farm and the surrounding arable fields. Cowtham House is therefore not considered sensitive to change, and the impact of the restoration plans is considered 'minor'.

625. The proposed changes to the landscape that would result from implementing the restoration scheme are both long-term and permanent. The changing character of the area and the significant loss of agricultural land associated with these two heritage assets would result in negative impacts to the historic environment. However, both farms would retain some association with arable farmland; in the case of Cowtham House, it is noted that this simply forms a backdrop to the curtilage of the former farmstead. Regarding Balderton Grange, the reinstatement of arable/agricultural land adjacent to the farmstead would go some way towards mitigating this loss.
626. The heritage impact assessment has demonstrated that the proposed quarry extension and associated restoration would result in some negative impacts to the wider landscape of both historic farmsteads. It is acknowledged that these impacts are more significant to Balderton Grange due to proximity and the surviving historic relationship between the heritage asset and the arable farmland that would be lost as a result of the proposals. The scale of impacts, post restoration, are assessed as being 'moderate' in the case of Balderton Grange. Essentially, this means that there would be some changes to the heritage asset's significance, whereby some elements of the asset or its setting are negatively impacted by the proposals. In contrast, the scale of impacts, on Cowtham House, post restoration would be 'minor' meaning there would be limited, minor changes to the significance of the heritage asset.
627. In terms of the planning balance, great weight is given to mineral development, given that minerals can only be worked where they are found, and that on balance mitigation has been designed into the scheme. In this respect, a buffer or stand-off distance for blasting and extraction would ensure the integrity of the non-designated heritage assets, and it is noted that whilst the proposed development would involve significant restoration to wetland conservation in the southern extension, mitigation would be partially achieved by the return of land nearest Balderton Grange to an arable/agriculture land-use, thereby re-establishing Balderton Grange's connectivity to the rural agricultural landscape.
628. It is noted that the County Council's Heritage Officer requested a thorough investigation of the historic building fabric of Balderton Grange and Cowtham House, however, there was no agreement from the applicant to submit this.
629. Notwithstanding this, the County Council's Heritage Officer has advised that the 'scale of any harm' is likely to be 'less than substantial', even if the fabric of either building was determined to be of greater age than the applicant has indicated. Whilst further information would have been welcomed to determine that with more certainty, it is noted that the additional information sought would unlikely have influenced the result of the weighing up.

630. The potential heritage significance of Cowtham House and Balderton Grange was not investigated further by the applicant with regards to the built fabric of the complex of buildings but on balance it is considered that the heritage impact assessment and the supplementary Reg. 25 submission is appropriate, adequate and proportionate for the purposes of determining the planning application in the context of NPPF paragraphs 194 and 203. It is noted that the impacts on the setting of both sites is properly and accurately reported and that the level of harm would be 'less than substantial'. The County Council's Heritage Officer is in agreement with this assessment. In light of the non-designated status of the two sites and the level of harm, which in accordance with paragraph 203 of the NPPF, is 'less than substantial', it is considered that the proposed minerals development is compliant with national policy subject to planning conditions controlling phased gypsum extraction and restoration, standoff distances to both non-designated heritage assets, and controls over noise, dust and blasting. In terms of impact on the setting the heritage assets, it is evident that the Balderton Grange farmstead would be most impacted upon by the proposed quarrying activities falling as it does within the redline site area. However, even in relation to Balderton Grange a less than significant level of harm has been identified.
631. In conclusion, it is noted that the scale of any harm from the proposed minerals development is considered likely to be 'less than substantial', and that the conclusions arrived at through the historic impact assessment which identifies less than significant harm to the heritage assets, comprising Balderton Grange and Cowtham House, would be unlikely to be changed by the findings of the additional information sought by the County Council's Heritage Officer. Even if it was proven that the fabric of the buildings comprising Balderton Grange and Cowtham House were actually dated at a greater age than has been determined to date through the heritage impact assessment, the indications are that this would not alter the outcome of the assessment, which is that the scale of any harm to either farmstead from the development would be less than substantial.
632. On balance, the harm of the development on non-designated heritage assets is clearly outweighed by the public benefits of the proposal in terms of securing a vital, rare, high-grade mineral resource (one which is used in a range of health/medical products and for construction purposes). It is considered that the public benefits of the proposed development outweigh the level of harm or loss, relative to the importance of the heritage assets. It would secure an optimum viable use of the proposal site for mineral extraction, and support the long-term viability of Bantymock. In accordance with paragraph 203 of the NPPF, the effect of the application on the significance of a non-designated heritage asset has been taken into account in determining the application. In this respect, the heritage assessment is considered overall to be both proportionate and appropriate; and the mitigation which would be secured by conditions is considered capable of ameliorating the direct and indeed indirect effects of the proposed development to an acceptable level.
633. The MPA considers that on balance the need for the minerals development clearly outweighs the harm on the heritage assets, taking into account the

significance of them as non-designated assets, with the level of harm being of less significance than had the heritage assets been designated assets, and that the lack of a building record does not prevent the application from being determined. As such, it is considered that the development is compliant with adopted MPA Policies SP5, DM6, and MP7c, including the development brief, and the NPPF at paragraphs 194 and 203.

### Flood Risk

634. Adopted MLP Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the built, historic and natural environment. The consideration of impacts will include effects on water quality and supply, and flood risk.
635. The supporting text to this policy at paragraphs 3.62 and 3.65 respectively, indicates that development wherever possible should be directed to areas of low risk and that future mineral extraction within high-risk areas is unlikely to be avoidable but that mineral restoration schemes can provide opportunities to reduce flood risks.
636. Adopted MLP Policy DM2 (Water Resources and Flood Risk) states that proposals for minerals development will be supported where it can be demonstrated that there are no unacceptable impacts on surface water quality and flows or groundwater quality and levels at or in the vicinity of the site. It also states that where opportunities exist, measures should be included to improve overall water quality, and that water resources, where required, should be used as efficiently as possible.
637. In relation to flooding, MLP Policy DM2 states that proposals for minerals development will be supported where it can be demonstrated that there will be no unacceptable impact on: flood flows and storage capacity at the proposed site or in the vicinity of the site; the integrity or function of flood defences or structures acting as flood defences; and finally on local land drainage systems.
638. It further states that where the opportunity exists, restoration proposals should seek to incorporate flood risk reduction measures, for example, flood plain storage and reconnection, flood defence structures, and land management practices to benefit local communities. Finally, minerals development should include Sustainable Drainage Systems (SuDS) to manage surface water drainage unless it can be shown that it is impracticable to do so.
639. Also of relevance is MLP Strategic Policy SP3 (Climate Change) which states that where applicable, development should assist in the reduction of vulnerability and provide resilience to the impacts of climate change by avoiding areas of vulnerability to climate change and flood risk. Where avoidance is not possible, impacts should be fully mitigated. Finally, where applicable, development should assist in the reduction of developing restoration schemes

which will contribute to addressing future climate change adaptation, including through biodiversity and habitat creation, carbon storage and flood alleviation.

640. It is noted that the site allocation brief for Bantymock quarry south, MLP Policy MP7c, directs that the mitigation of potential flooding should be considered by way of a Flood Risk Assessment (FRA); and consideration given to water quality in relation to the aquifer.
641. In support of the planning application, a detailed assessment of the potential adverse effects on the hydrology and hydrogeology (the water environment) from the proposed development has been submitted, as part of the ES.
642. The assessment has established the current baseline geological and hydrogeological conditions; it has identified possible measures to avoid and mitigate against any adverse changes or impacts resulting from the proposed quarry extension; and it has evaluated the residual significance of these impacts. This has been achieved by considering the sensitivity of the baseline features of the proposed southern extension and the potential magnitude of these changes following mitigation. This assessment together with best practice guidance including measures already embedded in the working of the northern extension has been used to inform the site design.
643. Planning policy relating to the management of flood risk in relation to mineral development is set out in the NPPF and the supporting Planning Practice Guidance (PPG).
644. Paragraph 159 of the NPPF states that where development is necessary in areas at highest risk of flooding, the development should be made safe for its lifetime, without increasing flood risk elsewhere. NPPF paragraph 167 advises that when determining a planning application, local planning authorities should ensure that flood risk is not increased elsewhere, and where appropriate, applications should be supported by a site-specific flood-risk assessment. Development should only be allowed in areas at risk of flooding, where the development is appropriately flood resistant and resilient and where it can be demonstrated that any residual risk can be safely managed.
645. PPG Paragraph 018 sets out a sequential, risk-based approach when determining where development should be located. This seeks to ensure that development is directed away from medium and high flood risk areas (Flood Zones 2 and 3) wherever possible. Application of the sequential approach and in particular the Sequential Test seeks to ensure that development can be safely and sustainably delivered. The guidance does recognise that mineral deposits have to be worked where they are found. However, it directs that mineral working should not increase flood risk elsewhere and that any such development needs to be designed, worked and restored accordingly. It is advised that sequential working and restoration can be designed to reduce flood risk by providing flood storage and attenuation (Paragraph: 018 Reference ID:7-018-20140306).



646. In terms of vulnerability to flood risk, and flood zone compatibility, PPG Paragraphs 066 and 067 indicate that minerals working and processing is identified as being 'less vulnerable' development (Paragraph 066: Reference ID: 7-066-20140306 & Paragraph 067: Reference ID: 7-067-20140306). As shown in the table below, 'less vulnerable' development types are potentially appropriate forms of development in all flood zones, except flood zone 3b (the functional floodplain).

	<b>Flood Risk Vulnerability Classification</b>				
<b>Flood Zones</b>	<b>Essential Infrastructure</b>	<b>Highly vulnerable</b>	<b>More Vulnerable</b>	<b>Less vulnerable</b>	<b>Water compatible</b>
<b>Zone 1</b>	Development appropriate	Development appropriate	Development appropriate	Development appropriate	Development appropriate
<b>Zone 2</b>	Development appropriate	Exception Test Required	Development appropriate	Development appropriate	Development appropriate
<b>Zone 3a</b>	Exception Test required	Development should not be permitted	Exception Test Required	Development appropriate	Development appropriate
<b>Zone 3b</b>	Exception Test required	Development should not be permitted	Development should not be permitted	Development should not be permitted	Development appropriate

647. The Sequential Test with reference to the NPPF, gives preference to locating new development in areas at the lowest risk of flooding i.e. Flood Zone 1. The EA flood map for planning provides the basis for applying this test and in this respect, it indicates that the proposed southern extension site is largely situated within Flood Zone 1. It is stated at PPG Paragraph 033 that when applying the Sequential Test, a pragmatic approach on the availability of alternative locations should be taken into account. In this respect, minerals can only be worked where they are found, and the high-quality of the gypsum at Bantycok is also noted. There are no alternative mineral resources in the medium to longer terms capable of maintaining the plant and infrastructure at Bantycok and the associated Jericho Works. The sequential test therefore has not been given any further consideration, which is considered appropriate in this case (Paragraph: 033 Reference ID: 7-033-20140306).

648. Given that the proposed development is a 'less vulnerable' land-use, which is capable of being located in Flood Zone 1, 2 and 3a, the exception test is not required and need not be applied to this development. For the purposes of this

planning application, the minerals development is appropriate development in both Flood Zone 1 and Flood Zone 3a.

649. A site-specific flood risk assessment should be provided for all development in Flood Zones 2 and 3, as land is identified as being at risk of increased flooding. In Flood Zone 1, an assessment should accompany any proposal involving a site of 1 hectare or more.
650. Appropriately, a Flood Risk Assessment (FRA) has also been submitted, as part of the ES, in support of the application and the flood risk posed to the proposed development has been assessed in line with BS:8533 and national planning policy and guidance. In line with this, a wide range of potential sources of flooding to the proposal site have been considered.
651. The assessment has concluded that whilst the site is located partially within Flood Zone 3, indicating that the annual probability of flooding at the south-eastern extent of the site is above 1%, the majority of the site is located within Flood Zone 1, whereby the risk of fluvial flooding is low. Mitigation measures have been recommended in order to ensure that the development does not increase the risk of flooding either at the site or for off-site areas and to ensure that all site operatives remain safe during the operation of the development. These measures include:
- ensuring existing ground elevations in the south-east of the site i.e. the area mapped as Flood Zone 3a are not raised above existing ground levels either during the development or as part of the site restoration, to ensure flood waters are not displaced;
  - placing all flood sensitive elements of the scheme within low risk areas i.e. in Flood Zone 1;
  - emergency planning to ensure that all personnel at work or visiting the site remain safe;
  - attenuating and treating water on site before discharge, in accordance with quality, rate and volume conditions as agreed with the Environment Agency and the Upper Witham Internal Drainage Board; and
  - water treatment and attenuation measures should take account of the potential effects of climate change and rainfall intensities as specified in the FRA.
652. It is noted that the flood risk assessment has been amended to overcome concerns raised by the EA that inadequate mitigation against the flood risks posed by the development had been considered. In particular, the assessment had failed to propose a detailed scheme for flood storage compensation, and this is required to mitigate against the loss of floodplain volume caused by the footprint of the noise mitigation bunds in the south-eastern corner of the application site.

653. The Regulation 25 response acknowledges that without mitigation, the siting of temporary bunds as proposed in the floodplain could potentially give rise to a limited but adverse impact on flood storage. However, attention is drawn to the fact that such an impact would be temporary and that more generally the excavations of the quarry at the edge of the floodplain would actually increase the amount of flood storage available as material is removed, with the final restoration contours actually being lower than the current ground surface. Notwithstanding this, the Regulation 25 response has sought to ensure that there is no potential for short term adverse effects on flooding locally.
654. It is noted that to provide noise abatement, it is necessary to locate a temporary soil bund(s) in the floodplain in the south-eastern part of the proposal site and it is recognised that without appropriate design this bund has the potential to displace floodwater and hinder flood water conveyance. It would therefore be necessary to develop this bund with breaks, which would allow the passage of floodwater. In this respect, the breaks in the bund would be capable of overlap in such a way that both noise abatement and flood water conveyance would be capable of being provided. The footprint of the temporary bund would be determined as part of the detailed quarry design and the bund would require a Flood Risk Activity Permit, issued by the Environment Agency. It is noted that the permit application is intended to be made prior to the bund in the floodplain being constructed and at this stage the application would include details of the bund design, the frequency and size of the breaks in the bund and any erosion protection to be provided to the base of the bund.
655. The proposed temporary soil bund would also cut off Cowtham Drain and two smaller drains within the south-western extent of the development, disrupting flows from these areas and potentially isolating an area of in channel storage to the rear of the bund along these channels. Consequently, and in order to address this, it is proposed to create gaps within the proposed bunding at the confluence of these drains with the Shire Dyke, in order to maintain conveyance and storage, during a flood event. As noted, the Shire Dyke and Cowtham Drain are managed by the Upper Witham IDB and to comply with their bylaws, the proposed temporary bunds would be located at least 6m away from the top of the bank of the two watercourses. This would also apply to the proposed gap within the bund to maintain connection between the Cowtham Drain and the Shire Dyke. The applicant has stated that if, for any reason, this stand-off cannot be achieved, permission would be sought from the Upper Witham IDB for the required bunding to be sited inside the 6m channel easement. It is considered that the supplementary Regulation 25 observations do not affect the overall conclusions of the ES, as submitted, and the amended flood risk assessment has overcome the Environment Agency's original concerns.
656. The flood risk assessment indicates that a small portion of the south-eastern extent of the proposal site is at risk from fluvial flooding of the Shire Dyke and it is recommended that any flood sensitive equipment is located in the area of lowest risk i.e. Flood Zone 1 to minimise the significance of flooding at the proposal site.

657. It is noted that the key aspects of the proposed development that have the potential to affect the water environment are the excavation and redistribution of soils, overburden and quarried materials during the operational and restoration phases, with the potential for spillage of contaminating liquids from the plant operating at the quarry and the generation of suspended sediment within surface water runoff and groundwater; and both operational and extraction activities at the quarry, with the resulting changes to the hydrogeological and hydrological regimes including flood risk at and within the vicinity of the proposed southern extension site. In terms of the restoration scheme, it is noted that this would contain a relatively significant waterbody and associated wetland area, which would extend across the proposed southern extension. The wetland area would directly affect the Shire Dyke, given that it incorporates a design overflow or discharge to the dyke.
658. Site observations indicate that there is limited or indeed no hydraulic connectivity between the groundwater units and that groundwater seepages into the active void are minimal, and that this has been the case for many years. These observations also confirm that the permeability of the bedrock strata underlying both the existing and indeed proposed quarry is low as would be expected given that mudstone and siltstone dominate the strata. Consequently, significant dewatering of groundwater is not experienced at site nor is it anticipated in the southern extension and any lowering of groundwater levels during mineral extraction is therefore extremely limited and would not extend far from the area of working.
659. In terms of groundwater quality, whilst there is no available groundwater quality data for the bedrock aquifers in the vicinity of the proposed southern extension, given the geological setting, it is considered that groundwater quality would be relatively poor due to the long travel times associated with the relatively low permeability of the Triassic strata.
660. In terms of identified sensitive receptors, it is noted that there are no water based ecological receptors or surface water abstractions within and adjacent to the proposed southern extension site boundary; there are a number of smaller watercourses and drainage ditches within the immediate vicinity of the proposed southern extension which drain to the main rivers; the site is located within a Drinking Water Protection Area, associated with a surface water abstraction from the River Witham downstream of the site; and there is a statutory requirement for the protection of surface water quality by the EC Water Framework Directive (2000/60/EC).
661. The sensitivity of groundwater within the Triassic bedrock aquifer is assessed as 'medium' to 'high' given the following: there are no known current licensed or unlicensed abstractions utilising this aquifer within the study area; and there is a statutory requirement for the protection of surface water and groundwater quality by the EC Water Framework Directive (2000/60/EC).
662. The EA has confirmed that there is one licensed groundwater abstraction located approximately 1.6km south-east of the proposed development, with the abstraction being for direct spray irrigation purposes at Willow Tree Farm,

abstracting water from the superficial fluvial sand and gravels. It is noted that these deposits do not underlie the proposed development area and the abstraction therefore is not in hydraulic continuity with the proposal site. The proposed development would therefore have no impact.

663. It is also confirmed that there are no Source Protection Zones (SPZ) within 1km of the proposed southern extension, with the closest SPZ being located approximately 2km north of the proposed extension area, and is likely to be associated with the Balderton Sand and Gravel superficial aquifer which again does not underlie the proposed development.
664. The proposed extension would bring the quarrying operations adjacent to farmland at the adjacent farm with only the Shire Dyke between the different land-uses. As such, concerns have been raised by the occupiers of the farm, as to whether the levels of water in this dyke would be affected, either higher levels caused by pumping or lower levels due to any water draining from the dyke into the large pits or voids created by the gypsum extraction. It was hoped that neither scenario would apply as this could potentially be detrimental to their business because of the effect on the yields of their nearby crops.
665. It is confirmed by the applicant that water from the mineral workings would continue to be pumped into the dyke to keep the workings dry; and that there is an existing discharge consent that covers this and limits the amount of water (flow) that can be pumped. The benefit of dewatering is that it ensures that there is water in the dyke all year round.
666. The adjoining landowner in neighbour representations has sought confirmation as to whether there are rights to compensation for any crops affected, in the event that levels in the drainage channel are unduly affected. The applicant has confirmed that it is not envisaged that the water levels in the dyke would be affected and that in support of this position, there is no evidence of diminished yields due to existing operations at Bantycok.
667. It is noted that the proposed development would not alter the current (baseline) regional groundwater flow regime within the bedrock aquifer, either during the operation of the quarry or following restoration, given that the influence on groundwater flow and levels would be localised due to the relatively low permeability of the bedrock. The assessment demonstrates that the proposed development would not alter surface water flows and any attendant flood risk downstream of the proposed southern extension site for the following reasons: during quarrying, surface water run-off would be retained within the quarry void, prior to settlement and controlled discharge off-site via the current surface water management scheme; the restoration scheme would continue to drain into the Shire Dyke, which is located along the southern boundary of the proposed southern extension, thus maintaining current surface water flow path; and although the surface water catchment area, draining to the proposed restoration pond would increase, the increased surface area of the restoration pond within the proposed southern extension would also provide additional storage capacity to attenuate to greenfield run-off rates up to the 1% Annual Exceedance Probability (AEP) plus climate change event. As such, the proposed

development is compliant with adopted MLP Strategic Policy SP3 regarding resilience to climate change.

668. Given the above, the magnitude of change is assessed as negligible and thus the significance of effect is also assessed as negligible and accordingly, it is concluded that the potential effects on the hydrogeological and hydrological regimes and flooding would be less than significant. Overall, no significant effects have been identified.
669. In terms of embedded mitigation, this would be provided through the inclusion within the scheme of appropriate water management measures and no additional mitigation measures, above and beyond this, are considered necessary. It is noted that there are no identified residual effects.
670. During the operational and restoration phases of the proposed southern extension there is a risk of contaminated run-off being generated from a number of potential sources, as a result of accidental spillage of fuels, lubricants and other potentially contaminated liquid; and from suspended solids within surface water run-off.
671. However, given the pollution prevention measures that would be employed across the proposed extension site, it is considered that the magnitude of change on groundwater quality due to spillage of fuels, lubricants and other potentially contaminative liquids would be negligible. It is also acknowledged that any suspended solids generated within surface water run-off within the proposed southern extension would also 'settle out' within the water management system as happens under current conditions. The significance of potential effect to groundwater and surface water quality is assessed as being negligible, and consequently there is no requirement for additional mitigation measures to protect groundwater or surface water.
672. It has been confirmed that, as a consequence of the site design and embedded mitigation in the site design, that there are no predicted significant effects on surface water or groundwater receptors during the operational and restoration phases of the proposed development. Consequently, additional mitigation measures are not required beyond those already built into the scheme design for the site.
673. Best practice guidance has been used to inform the site design; and an impact assessment has then been prepared which takes account of the embedded mitigation included in the scheme proposals. Potential impacts during the operational and restoration phases have been assessed.
674. Following restoration of the site, which includes the creation of a large waterbody and wetland, flood risk to the Shire Dyke and downstream of the site would be reduced, as additional flood plain storage would be provided at the site compared to current or baseline conditions.
675. The technical assessment of risk presented within the Flood Risk Assessment demonstrates that the flood risks present at the proposed site are manageable

throughout its lifetime without increasing flood risk elsewhere. The Flood Risk Assessment has considered all potential sources of flooding to the site and overall has concluded that the proposed southern extension site is capable of being developed without increasing flood risk either on site or downstream of the site. As such, the proposed development subject to appropriate planning conditions securing the Flood Risk Assessment in relation to an appropriate surface water management scheme, is in compliance with adopted MLP Policies SP5, DM2 and MP7c, including the site allocation brief, and the NPPF.

#### Agriculture/Conservation of Soil Resources

676. Adopted MLP Strategic Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the natural environment. The consideration of impacts will include effects on best and most versatile agricultural land and soils.
677. The supporting text to MLP Policy SP5 at paragraph 3.58 notes that minerals can only be worked where they are found, and this can often involve large areas of agricultural land. This means that a balance has to be made between the need for the mineral and the protection of the agricultural land. Paragraph 3.59 provides more detail regarding agricultural land quality making reference to the agricultural land classification (ALC) system; the methodology for assessing farmland quality. The ALC system classifies land into five grades, with grade 3 subdivided into sub grades 3a and 3b. The best and most versatile land is defined as grades 1, 2 and 3a. It is pointed out that appropriate management and restoration of mineral workings can secure the safeguarding of best and most versatile soils.
678. The development brief for Bantycok quarry south, allocated under Policy MP7c of the adopted MLP recognises that restoration would involve the return of land to agriculture as well as nature conservation.
679. Adopted MLP Policy DM3 (Agricultural Land and Soil Quality) states that proposals for minerals development located on the best and most versatile agricultural land (grades 1, 2 and 3a) will be supported where it can be demonstrated that proposals will not affect the long-term agricultural potential of the land or soils; or where there is no available alternative and the need for development outweighs the adverse impact upon agricultural land quality. Where alternative options are limited to varying grades of best and most versatile land, the development should be located within the lowest grade. It also seeks to ensure that measures are taken to adequately protect and maintain soil quality throughout the life of the development, particularly during stripping, storage, management and final placement of soils, sub-soils and overburden arising, as a result of site operations.
680. The planning application is supported by a soil resources and agricultural land quality survey as part of the ES which has been undertaken for the 149.6 ha of land to the south of Bantycok Quarry. Natural England is satisfied that the

resulting Soils and Agricultural Land Classification Report constitutes an appropriate record of the pre-working ALC grading and physical characteristics of the land within the proposed southern extension.

681. The agricultural land within the extension area incorporates 43.3 ha of 'best and most versatile' (BMV) agricultural land (subgrade 3a) or 29 per cent of the land; with the remaining 104 ha, or 69 per cent of the land, being of moderate quality (subgrade 3b). A further 2.3 ha or 2 per cent of the land is of non-agricultural land comprising the farmstead and yard, tracks and ditches. It has been identified that if the site were to be restored to agriculture following mineral extraction there are four identified soil resources for re-use. These soil resources comprise two topsoil resources (heavy topsoil and medium loamy topsoil); and two subsoil resources (sandy loams and clay). Natural England, in their consultation response, confirm that it would be appropriate to return land to agriculture as an after use as part of the restoration of the site. This is in line with the development brief for Bantycok quarry south, under Policy MP7c of the adopted MLP, which supports a mix of agriculture and nature conservation.
682. Paragraph 040 of the PPG indicates that the level of detail required in support of the application must be sufficient to clearly demonstrate that the overall objectives of the restoration and aftercare scheme are achievable; and that this should include information concerning soil resources, including the handling of topsoil, subsoil, overburden, and soil making materials whilst extraction is taking place (Paragraph: 040 Reference ID:27-040-20140306).
683. In line with this policy direction, the report sets out guidance in relation to soil handling and restoration. It identifies that the majority of soil resources within the proposed southern extension have a high clay content, making them susceptible to structural damage if stripped or moved when wet. It is recommended that soil stripping be avoided during or just after, i.e. within 48 hours, of heavy rain, with this activity best carried out between May and November when soils are likely to be dry. These soils should be moved using the excavator and dumper method set out in the Institute of Quarrying 'Good Practice Guide for Handling Soils in Mineral Workings', which have recently replaced the long-standing MAFF 'Good Practice Guide for Handling Soils'.
684. In the event that direct placement of stripped soils onto areas being restored is not possible, then the resources should be stripped and stored separately in low bunds, which in the case of topsoil should be no more than 4m high. Topsoil should be stripped from areas designated for storing substance subsoil. Bunds should be constructed either by excavator or bulldozer avoiding over-compaction and sown with grass to help maintain biological activity and prevent water erosion if in place for more than six months. Extant planning conditions would be carried forward from the existing site to ensure that soils are handled appropriately at the optimum time of the year and sown with an appropriate grass seed to support and maintain biological activity and to prevent water erosion where the bunds are to be in situ longer term. Soils should be removed from storage and replaced by excavator during the summer months using the 'loose tipping technique', which seeks to avoid traffic traversing the restored surfaces. Again, extant planning conditions rolled forward would ensure that



soil placement during the restoration phase is carried out in an appropriate manner in line with good practice.

685. NPPF Paragraph 210 supports the high-quality restoration and aftercare of mineral sites. PPG Paragraph 040 also states that where working is proposed on BMV land, the proposed restoration and aftercare should enable the land to retain its longer-term capability, though the proposed after-use need not always be agriculture. In line with this, it is noted that whilst the restoration proposals on some of the BMV land are for non-agricultural purposes, NE considers the proposed reclamation to a biodiversity after use acceptable. This is on the understanding that the methods used in the restoration and aftercare would enable the land to retain its longer-term capability to be farmed to its land classification potential, thus remaining a high-quality resource for the future.
686. It is noted that the ES has demonstrated that an equivalent or substantial area of the BMV land disturbed as a result of the development would be reinstated to a similar quality, suited to a productive agricultural after use.
687. It is also noted that Natural England is satisfied that the site working and restoration proposals provided in support of the application meet the requirements for sustainable minerals development set out in the NPPF and PPG, particularly in relation to restoration and after-care, and recognised best practice.
688. The intention is to restore a significant proportion of the extraction area to subgrade 3a BMV agricultural land, thereby ensuring that the soil resource is appropriately protected and beneficially used. The restoration of the southern extension will ensure that BMV land is returned to agricultural production. Subject to extant planning conditions, soil resources would be safeguarded and on reinstatement would be capable of achieving a high standard of agricultural reclamation. Over the longer term no significant impact would be caused to the soil resources on the site, thus ensuring compliance with adopted MLP Policy DM3.
689. Subject to extant planning conditions being appropriately updated and carried forward to the proposed southern extension, the proposed development is compliant with adopted MLP Policies DM3, SP5 and MP7c. The supporting information has demonstrated that the proposed mineral development, which would involve the use of BMV agricultural land, would not affect the longer-term agricultural potential of the land or soils, subject to recognised best practice, secured by way of conditions. Mitigation measures secured by condition would ensure that soil quality is maintained throughout the life of the proposed development. As such, the proposed site operations and reclamation proposals subject to planning conditions, meet the requirements for sustainable minerals development in compliance with the NPPF and PPG.

#### Traffic

690. Adopted MLP Strategic Policy SP5 (The Built, Historic and Natural Environment) states that all mineral development proposals will be required to deliver a high standard of environmental protection and enhancement to ensure that there are no unacceptable impacts on the built, historic and natural environment. The consideration of impacts will include effects on highways.
691. The supporting text to MLP Policy SP5 at paragraph 3.67 highlights the fact that the majority of minerals are transported by road, due to the relatively short distances involved to local or regional markets. Therefore, minerals proposals are required to take into account the likely impacts upon both the local highway network and nearby communities arising from increased levels of traffic. Potential impacts that should be considered include congestion, road safety, noise, dust, and vehicle emissions. However, it points out that development should only be prevented or refused on transport grounds where the residual cumulative impacts are severe.
692. Further details in relation to potential impacts on highway safety and vehicle movements are set out in Policy DM9 of the adopted MLP.
693. Adopted MLP Policy DM9 states that proposals for minerals development will be supported where it can be demonstrated that:
- the highway network including any necessary improvements can satisfactorily and safely accommodate the vehicle movements, including peaks in vehicle movements, likely to be generated;
  - the vehicle movements likely to be generated would not cause an unacceptable impact on the environment and/or disturbance to local amenity;
  - where appropriate, adequate vehicle routing schemes have been put in place to minimise the impact of traffic on local communities; and
  - where measures have been put in place to prevent material such as mud contaminating public highways.
694. It is noted that the vast majority of minerals are transported from quarries to their local and regional markets via the existing road network due to the flexibility and relatively short distances most minerals are transported. It is acknowledged that this can cause a significant increase in the level of HGV traffic on the local and wider road networks, and that it is important that the impact of this traffic is minimised.
695. With regards to this planning application, the proposed southern extension would not affect the existing transport patterns at Bantycok Quarry. The southern extension would not alter the number of HGVs accessing the site or the output of the quarry during each operational day. However, the extraction of additional mineral originating from the southern extension would extend the length of operations for mineral extraction and associated vehicle movements by a further 15 years, with an overall completion date of 2044.

696. In terms of lorry routing, there is no agreed lorry route and HGVs tend to take a number of routes, depending on the destination of the primary mineral, and any given traffic issues and roadworks at the time. The established routes are the A1 north, the A1 south, the A46 south and A617 routes, and these routes would continue to be used.
697. The A46 southbound route is heavily congested at the A1/A46/A17 junction and as a result is very infrequently used. Lorries delivering to British Gypsum's sites at East Leake, Barrow and Fauld therefore tend to access the A46 southbound via Bowbridge Lane, Bowbridge Road, the B6326 London Road and the B6166 Portland Street/Farndon Road, or use the C3 road network via the villages of Staunton in the Vale, Alverton, Orston and Elton. This follows an amendment to the weight restriction order in 2015 by the Highways Authority which effectively brought the Bantycok site within the weight restriction area, thereby allowing the use of the C3 road by HGVs transporting gypsum from the site.
698. The Newark Southern Relief Road is expected to be completed over the next year or so, with an approximate date of opening of mid-2023. On completion, the applicant has confirmed that this would become the primary route for all HGVs leaving the site and travelling towards the A46 southbound. This would then alleviate the need to use the C3 road via Staunton, Alverton, Orston and Elton.
699. With regards to lorry movements, existing controls currently in place under extant planning condition 10 (Ref. 3/18/01723/CMA) would be carried forward to the southern extension. This would continue to restrict daily maximum HGV trips to 100 (200 HGV movements per day, 100 in and 100 out), (pro-rata for Saturdays and Sundays), with a rolling 6-week average based on 80 HGV trips per day, Mondays through to Fridays (160 HGV movements per day, 80 in and 80 out), (pro-rata for Saturdays and Sundays). Annually, the average figure would continue to be 60 HGV trips per day Mondays to Fridays (120 HGV movements per day, 60 in and 60 out), and 60 HGV movements per day on Saturdays and Sundays (30 in and 30 out). Written records would continue to be maintained by the operator, recording all HGV movements into and out of the quarry site. It is noted that the proposed working of the southern extension would not result in any increase in lorry movements and there would be no intensification in terms of traffic impact on the local and wider road networks.
700. As such, subject to this condition, it is considered that the residential amenity of those residents living both within the local vicinity of the quarry, as well as along the lorry route, particularly those living along the route of the C3 road through the villages of Staunton in the Vale, Alverton, Orston and Elton, would continue to be protected. As such, the proposal would accord with adopted MLP Policies SP5 and DM9.
701. A key concern raised by local residents relates to potential traffic impacts associated with the proposals, and the potential for increased traffic flow in and around the proposed site.

702. Such concern would appear to be unfounded given that the proposed development would not intensify activities, and would in practice involve maintaining current production levels, albeit for an extended period of time, with resultant traffic movements remaining as currently experienced at the permitted quarry site. County Highways has reviewed the planning application and agreed that the proposals would not change the amount of permitted HGV movements. It is satisfied that the proposed development would not change the volume of HGV traffic associated with the quarry and would therefore have no material impact on the public highway.
703. All other elements would remain the same, from the purpose-built access arrangements off Staple Lane to the existing wheel-wash facilities which control mud and debris from being deposited onto the public highway including from the transporting of gypsum across Staple Lane to the Jericho Works. All vehicles leaving the site would continue to be securely sheeted. Again, these controls would be carried forward, thereby ensuring that highway safety is maintained, and that the requirements of adopted MLP Policy DM9 are satisfied.
704. Subject to the imposition of extant planning condition 10, the proposed development would not have a material impact on either the surrounding local road network, or the closest strategic route (the A1). It is noted that the proposed development will benefit from the opening of the Newark Southern Relief Road and that this alternative route will be beneficial in terms of diverting HGV traffic away from the C3 route. Overall, the proposed development is compliant with adopted MLP Policies SP5 and DM9.

#### Public Rights of Way

705. Adopted MLP Policy DM7 (Public Access) supports minerals development where it can be demonstrated that there would be no unacceptable impact on existing public rights of way. It also seeks improvements and enhancements to the rights of way network and, wherever possible, increased public access to restored minerals sites.
706. In line with this policy, it is noted that there are no recorded Public Rights of Way (PRoW) crossing the proposal site, and it is indicated that no PRoW would be directly affected by the proposed development of the site for mineral extraction.
707. It is noted that under the 'amenity' heading in the Site Allocation Development Brief for Bantymock Quarry South, reference is made to the *'potential to create right of way links through restoration, extending those proposed for the northern extraction areas and linking into Cotham FP7'*. It is acknowledged that the applicant's restoration proposal includes a network of new paths, some of which may improve the path network in this area. This would be beneficial in terms of creating recreational facilities for the local community, through the provision of 5,715 linear metres of footpaths, comprising permissive footpath links to adjacent public footpaths. Part of the proposed scheme would be for the provision of new circular walks around the southern lake area, with viewing points, and also linkages to paths in the restored northern site towards

Fernwood. It is acknowledged that the applicant has sought to deliver a scheme that has fulfilled this requirement of the development brief. In this respect, the proposed restoration scheme has sought to improve and enhance the rights of way network within the area, adding cumulatively to its provision, and increasing public access to the southern extension area when restored. As such, the proposals would accord with adopted MLP Policy DM7. Over the longer term, the restoration of the site would generally be beneficial, in terms of local amenity.

708. The Countryside Access Team have highlighted to the applicant their potential liability for the maintenance and ongoing costs of any new paths provided as part of the restoration. It is noted that the Authority only accepts additional paths to the network when they are judged to be of strategic public benefit. This has been drawn to the applicant's attention during the planning application process and should planning permission be granted, in order to reiterate this point, it would be added on to any decision notice as an informative.

#### Aerodrome safeguarding

709. Adopted MLP Policy DM10 (Airfield Safeguarding) states that minerals development within the Airfield Safeguarding Areas of the listed airports, including RAF Syerston MOD Aerodrome, will be supported where the applicant can demonstrate that the proposed extraction, restoration and after use will not result in any unacceptable adverse impacts on aviation safety.
710. The supporting text to this policy, at Paragraph 5.109, states that the restoration of mineral sites to open water may create areas that attract roosting or loafing birds, such as gulls and geese. This is potentially dangerous in the vicinity of airports or airfields where any increase in the number of birds can increase the overall risk of bird strike to aircraft.
711. As part of the Regulation 25 submission, an Airfield Safeguarding Assessment was undertaken by the applicant to fulfil both the Ministry of Defence (MOD) Aerodrome Safeguarding requirements and those of MLP Policy DM10 in relation to the proposed development to extend Bantycok Quarry mineral operations up until 2044. It also sought to address a specific concern raised by the MPA regarding the creation of an open water lake with marginal habitat as part of the proposals to restore the southern extension area. This related to the potential risk of additional bird activity within the area associated with the increase in water habitat and the potential risk that this may pose to gliders taking off from RAF Syerston, from bird strike.
712. It is noted that RAF Syerston is home to Number 2 Flying Training School and houses both the headquarters and the RAF Central Gliding School, which provides formal training courses for members of the Volunteer Gliding Squadrons located at various locations around the UK. There is a requirement to ensure that the aerodrome and its associated airspace is safeguarded within a radius of 13 kilometres. In this context, Bantycok quarry is approximately 7 kilometres north-east of RAF Syerston and falls within the Aerodrome

Safeguarding Area. Therefore, a full assessment of all safeguarding issues affecting the gliding operations at RAF Syerston has been undertaken, and now forms part of the ES, in support of the planning application.

713. Bird Activity CAP 772 (Wildlife Management at Aerodromes) recommends aerodromes complete a 13km survey of wildlife hazards in the vicinity of an aerodrome. In addition, MLP Policy DM10 (Airfield Safeguarding) advises that consideration is given to aerodrome safeguarding, including the risk of bird strikes in the context of any proposed development. In this respect, a bird activity assessment was carried out and this concluded that there is minimal bird activity at Bantymock quarry with the only active species detected being seagulls, likely to be attracted to the area by the nearby Staple landfill site which has recently ceased importing waste. It is considered that the proposed mineral extraction at the southern extension would not add any additional and cumulative wildlife attractants to the area. In addition, the applicant does not intend to add any new structures within the proposed southern extension area, which may attract birds.
714. It is noted that the RAF gliders operating at RAF Syerston would normally operate at between 2,000 and 3,000 feet within the area of the quarry which is considered well clear of the seagulls migrating from the landfill to the quarry. It is assessed that there would be no additional bird activity associated with the new quarrying activity and that the current very low wildlife strike risk to RAF Syerston gliders would not increase with the proposed quarrying activities.
715. The proposed restoration plan seeks to restore the area to a natural greenfield site by 2044. In terms of the proposed restoration plan, it would introduce additional water features on the site of the proposed southern extension. However, it is noted that the applicant has committed to working within the recommendations of MLP Policy DM10 (Airfield Safeguarding) to address aviation safety to mitigate the risk of flocking birds presenting a bird strike hazard.
716. It is noted that the proposed restoration for the southern extension has focused on creating habitat to enhance its biodiversity value and providing net gains for biodiversity. In this context, the proposed lake would form part of a network of new biodiverse habitats being proposed as part of the development proposals. The proposed restoration scheme has sought to fulfil the requirements of the site development brief set out under adopted MLP Policy MP7c (Bantymock South).
717. It is acknowledged and agreed, under a supplementary Regulation 25 submission, that the proposed lake in the southern extension area is indeed likely to attract wildfowl, such as geese and swans, which are anticipated to roost on the lake at night in areas of reedbed, before flying to neighbouring fields during the day. It is further acknowledged that the proposed open water body does lie within the 13km safeguarding zone of the airfield. Whilst acknowledging these inevitable constraints, this assessment does however point to the fact that to create new waterbodies for biodiversity outside these

zones is considered unrealistic, given that 44% of England falls within a bird strike conflict zone.

718. The assessment identifies that planes flying over the proposal area would not fly lower than 609m (2000ft), and according to the Federal Aviation Administration (FAA) 'Wildlife Hazard Management at Airports' report for 2005, less than 8% of strikes occur above 900m (3000ft) and the majority or 61% occur at less than 30m (98ft). It is therefore considered that any risk of birds taking off and landing on the lake and colliding with gliders from RAF Syerston at this height, is extremely low. Attention is drawn to the fact that neither RAF Syerston themselves nor the MOD object to the restoration proposals or have raised any safety concerns. The assessment also states that RAF Syerston has management systems in place to assess bird strike risk, and that these arrangements would continue to be in place, monitoring the situation, when the proposal site is fully restored. It is confirmed in the safeguarding assessment that these management systems will be re-assessed when the quarry is restored.
719. Overall, it is concluded that there are no aspects of the new development that would affect the RAF gliding operations; the highest spoil area would be no more than 43 metres above mean sea level, the blasting would have no effect on the surrounding air mass and there would be no notable water features until 2044 when the proposed southern extension is brought back to agricultural land and nature conservation uses. Even though this may attract birds in the future, it is assessed that the issue would be no worse than it presently is given that there has been a bird issue at the FCC Environment landfill to the south-west of the quarry (the former Staple Landfill). It is concluded that the proposed development including the restoration proposals (with lake) would not increase the risk of bird strike any more than the risk that exists currently. Overall, it is assessed that the risk of additional bird activity post 2044 may increase slightly but that this would not affect the current very low wildlife strike risk to RAF Syerston's gliders.
720. Regarding the proposed extraction itself, the assessment has confirmed that the process would be no different to the current extractive process which has not caused RAF Syerston any issues to date, in relation to dust and blasting .
721. The assessment finally identifies that aircraft can be at risk of collision with obstacles through the use of inappropriate lighting and occasionally temporary lighting may be used within the new quarrying area. However, it is noted that this lighting would be no different to current lighting already in use at the existing quarry which, as stated, has not caused RAF Syerston any concerns in the past.
722. National and local development plan policy requires mineral working, restoration and after use proposals to take account of aviation safety. The planning process therefore has an important role in preventing any unacceptable adverse impacts on aviation safety arising from minerals development. Therefore, aerodrome safety is a key material consideration in terms of determining this application. In response to this constraint, the applicant has taken into consideration aerodrome safeguarding, and addressed it through the EIA process.

Accordingly, the assessment has demonstrated that there would not be any significant effects regarding any increase in the risk of bird strike at RAF Syerston, but that this will be kept under review. It is noted that the Safeguarding Department (part of the Ministry of Defence) as the technical consultee, has not objected to the scheme. As such, it is considered that the proposed minerals development would not pose an unacceptable risk to aviation safety at RAF Syerston, and is compliant with MLP Policy DM10, and the NPPF and PPG.

#### Oil and Gas Pipeline Infrastructure

723. It is recognised that part of the proposals would likely involve working the mineral in an area containing oil pipeline infrastructure, which would involve the applicant seeking a diversion of the pipeline. The oil pipeline runs along the western edge of application site running in a straight line parallel to Grange Lane; the line of the pipeline involves a slight bend to the south of Balderton Grange Farm. Whilst that part of the pipeline that lies within the 'blast standoffs' to the properties of Balderton Grange Cottage and Balderton Grange Farm would not be disturbed by mineral extraction, a short section in the south-western corner and a longer section lie within the proposed extraction area. It is therefore proposed to seek a diversion of this infrastructure.
724. CLH-PS raised concerns regarding this matter through a holding objection, which have been raised with British Gypsum. The applicant has stated that there is a separate legal process regulated through a wayleave order; the oil pipeline having originally been installed under the provisions of the Land Powers (Defence) Act 1958. In this respect, this provides the legal framework to allow British Gypsum to serve 30 days' notice on CLH-PS when any mineral workings are within 40 yards of the pipeline, that they propose to extract mineral in the location of the infrastructure. CLH-PS then has the opportunity to serve a counter notice upon British Gypsum to prevent the mineral being worked, but subject to compensation being payable for the minerals sterilised by the pipeline. It is for British Gypsum to set out the value of the minerals potentially being sterilised by the presence of the pipeline infrastructure. This would then inform CLH-PS whether it is feasible to move the pipeline, or retain the existing line and pay compensation. The applicant states that this aspect of the development is a land matter rather than a planning matter.
725. Paragraph 56 of the NPPF states that planning conditions should not be used when they are not necessary or not relevant to planning. The Government's Planning Practice Guidance confirms that planning conditions which require compliance with other regulatory regimes will not meet the test of necessity and may not be relevant to planning. Given that another regulatory regime would cover any diversion of the oil pipeline infrastructure, it is concluded in this instance that it would not be appropriate to regulate this matter by way of a planning condition.
726. Notwithstanding this, in the event that the infrastructure either remains in situ, along its original line, or follows a diversion, it is considered appropriate,



reasonable and proportionate to attach CLH-PS and Exolum Pipeline System Limited's recommended planning conditions controlling blast induced vibration in relation to the pipeline.

727. The supplementary Regulation 25 assessment has confirmed that in relation to blasting, a vibration limit of 25mm/s PPV at a 95% confidence level when measured at the oil pipeline is capable of being achieved by suitable blast design using the recommended instantaneous charge weights set out in the table below. Based on the regression analysis this table provides the maximum instantaneous charge (MIC) allowable at set distances from the receptor.

Allowable maximum instantaneous charge (MIC) for set distances

Distance	Maximum Instantaneous Charge (kg)
20	1.18
25	1.84
30	2.64
35	3.60
40	4.70
45	5.95
50	7.35
55	8.89
60	10.58
65	12.42
70	14.40
75	16.53
80	18.81
85	21.23

728. Subject to a planning condition covering active vibration monitoring for blasting operations occurring within 400 metres of the oil pipeline, to ensure that the 25mm/s PPV limit is not exceeded, it is considered that there would be no significant material impacts on the pipeline infrastructure. As such, the development is capable of complying with adopted MLP Strategic Policy SP5,

which seeks to ensure that there are no unacceptable impacts on infrastructure from minerals development.

729. With regards to the high-pressure gas pipeline (FM09 Silk Willoughby to Staythorpe) extending across the site, the site allocation development brief for Bantymock South, at Appendix 2 of the MLP under adopted MLP Policy MP7c, states that the statutory safety clearances should be taken into account in relation to the gas pipeline. It is noted that in response to concerns raised by Cadent Gas, the original Regulation 25 assessment sought to demonstrate that any stand-off or protection measures considered necessary to ensure the safety of the gas pipeline is not compromised by mineral extraction.
730. In this respect, in relation to safe standoff to the pipeline infrastructure and the stability of the working quarry faces, the applicant commissioned a geotechnical review. This assessment incorporated the findings of a slope stability analysis and concluded that the use of the 'cut face' design issued in March 2020 for the cut faces in the proposed southern extension would provide a satisfactory factor of safety against instability. It has been demonstrated that the proposed excavation work would present no risk of undermining or disruption to existing infrastructure.
731. It is noted that the closest gas mains and feeder pipes to the proposed southern extension excavation are 80m away from the crest of the excavation, and that the factor of safety against potential slippage occurring which might affect the gas pipelines would be well in excess of 2. Therefore, the proposed excavation work is considered to present no slope instability risk to the gas mains and feeder pipes in the vicinity of the site. Whilst the oil pipeline is closer to the proposed excavation work, the line of the proposed excavation would be set in order to achieve a minimum stand-off of 30m between the crest of the excavation and the CLH-PS oil pipeline.
732. Overall, the proposed excavation work would present no slope instability risk to the infrastructure in the vicinity of the proposed southern extraction site. The proposed excavation work is considered to present no ground movement risk to any of the identified infrastructure within the vicinity of the works. The Regulation 25 assessment has demonstrated that the proposed development of the proposed southern extraction area is in accordance with both adopted MLP Strategic Policy SP5 and MLP Policy MP7c; and accords with the site allocation development brief for Bantymock South. Since this supplementary assessment was undertaken, it is noted that the line of the western edge of the proposed excavation has been adjusted to provide a minimum 30m stand-off from the CLH-PS oil pipeline. The gas main and feeder pipes are a minimum distance of 120m from the closest point of the proposed excavation in the most southwestern corner area and 80m in the south-eastern corner area. The assessment has focused principally on the oil pipeline given it is in the closest proximity to the proposed excavation; and also, it is nearest to an area of the proposed extraction area, where the excavation would extend to the greatest depth below ground level (approximately 50m).

## Cumulative Impact

733. MLP Policy DM8 (Cumulative Impact) states that proposals for minerals development will be supported where it can be demonstrated that there are no unacceptable cumulative impacts on the environment or on the amenity of a local community.
734. Regarding the potential for cumulative impacts, whilst the proposed southern extension would result in a further significant area of land being subject to mineral extraction and also extend the life of the working quarry, the phased working and restoration would ensure that the northern part of the site which is presently being worked would be subject to restoration works when the southern extension is being worked. This would help minimise the amount of operational land at any one time and thereby reduce cumulative impacts. By the time mineral extraction in the southern extension is completed, the northern part of the site would have been restored and much of it would have been in aftercare for a significant amount of time. Phased working and restoration in the southern extension area would also have resulted in some of that area being restored before the completion of quarrying activities. The phased working pattern would reduce blasting, dust and air quality, and noise impacts, limiting any combined or cumulative impact. There would be no increase in vehicle movements, again limiting the potential for any combined impacts.
735. The ES has identified that there are no other mineral operations within the vicinity of the quarry that could give rise to cumulative effects. There have been other gypsum workings in the area in the past, but Kilvington Quarry is now restored and Staple Landfill has recently ceased accepting waste and is in the process of being restored.
736. A neighbour representation has been received from an occupier living in Cotham village, who has raised concerns regarding the cumulative effects of several installations which have been developed in and around Cotham, for example, the wind turbines and new solar farm, over the last five years, stating that this has had a significant impact on the landscape of the locality and the degradation of local roads and verges. In response, attention is drawn to the fact that the Landscape and Visual Impact Assessment (LVIA) has sought to address cumulative effects. It has concluded that both adverse and beneficial cumulative effects are identified between Staple Landfill, the existing Bantycok site and the proposed southern extension, however, these effects are identified as being 'very minor' and not significant in terms of the EIA.
737. It is noted in the LVIA study that the wind turbines have been identified from a number of viewpoints selected around the southern extension site, the most pertinent of which is from Viewpoint 1 (B6326 west of Fernwood), looking west across the A1 and arable fields. The wind turbines are viewed along the skyline, with the existing gypsum works forming a prominent feature of the skyline along with the three wind turbines and a large spoil heap. The proposed southern extension would be viewed to the immediate south of the overburden mound; however, it is largely screened by intervening vegetation in a broadly flat landscape. These more industrial type features, as a whole, form a noticeable

and detracting feature on the skyline; and are viewed from several other viewpoints, i.e. viewpoint 4, public footpath 10/2 adjoining Fen Lane (looking northwest). From viewpoint 5, public footpath 7/2 north of Fen Lane (looking northwest), the group of three wind turbines again form a prominent feature on the skyline not far from the spoil heap. Finally, from viewpoint 6, Fen Lane at the entrance to Willow Bank Farm, looking northwest, the three wind turbines are clearly visible on the skyline. The solar farm has not been identified in the context of this study, so cannot be commented on.

738. It is envisaged that there would be no intervisibility between the three wind turbines and the southern extension area, nor is there any intervisibility between the Jericho Works and the southern extension area, therefore no cumulative landscape or visual effects are predicted.
739. Some minor adverse cumulative landscape effects would occur as a result of the southern extension area during the extraction phase due to the increased footprint of minerals activities. However, at year 15, the restored southern extension area would provide a positive addition to the landscape and would be fully integrated with the restored existing site. By this time, the existing workings to the north would have been restored and aspects such as tree and hedgerow planting would be well established.
740. Staple Landfill, a former gypsum quarry used as a non-hazardous landfill, has recently ceased accepting waste and is due to be restored by 2025. Once restored it will provide similar landforms to those proposed within the existing Bantycok Quarry and proposed southern extension area. It is noted that Staple Landfill would also promote similar habitats to those of Bantycok, and therefore in the long-term the cumulative landscape effects between both sites are likely to be positive.
741. Both adverse and beneficial cumulative effects are identified between Staple Landfill, the existing Bantycok Quarry and the southern extension, but these would be very minor and not significant in EIA terms.
742. There is no intervisibility between the proposed southern extension site or any of the restored sites, resulting in no adverse cumulative landscape or visual effects upon the restored minerals sites.
743. On this basis, it is considered that there would be no unacceptable cumulative impacts arising from the proposed southern extension, subject to continued good environmental practices, and the enhancement of existing mitigation measures that are already in place at the quarry. No significant adverse cumulative impacts have been identified in the ES, with the findings of the environmental assessments indicating that there are no significant residual impacts associated with the proposed development, subject to planning controls. As such, the proposal accords with the requirements of MLP Policy DM8.

#### Legal Agreement

744. Planning permission at Bantymock Quarry has historically not been subject to the requirement and completion of a legal agreement.
745. Environmental effects including those of HGV lorry movements associated with working the proposed southern extension to Bantymock Quarry and conservation aftercare is not subject to any Section 106 Legal Agreements, and it is considered that there is no requirement for the proposals under consideration in this report to be subject to any requirements for legal agreement.
746. Consideration has been given to the policy guidance in the PPG at paragraph 003 which states that planning obligations in the form of a Section 106 Agreement should only be used where it is not possible to address unacceptable impacts through a planning condition. (Paragraph: 003 Reference ID: 23b-003-20190901. Revision date: 01 09 2019). This is reiterated at Paragraph 55 of the revised NPPF where it states that Local Planning Authorities should consider whether otherwise unacceptable development could be made acceptable through the use of conditions or planning obligations. It again states that *'planning obligations should only be used where it is not possible to address unacceptable impacts through a planning condition'*.
747. As such, it is considered that planning controls over the environmental effects of the development are capable of being achieved through the use of appropriate planning conditions, in accordance with PPG Paragraph 003 and Paragraph 55 of the revised NPPF.

#### Other Issues

748. The issues of compensation has been raised by neighbour representation for the potential inconvenience that may be suffered if the proposed extension to the quarry is developed. The applicant has confirmed that in line with existing permissions (and indeed for other mineral permissions) no compensation is proposed. Attention is drawn to the fact that with regards to national and local planning policy, there is recognition that some environmental impact would occur, and planning policies are aimed at ensuring that any impacts are acceptable, having regards to technical limits and standard practice set out in the PPG. This is the role of the 'planning balance' where the effects of the development are weighed against the need for the mineral.
749. A neighbour representation highlights fly tipping and littering along Grange Lane and asks if the applicant can do anything to prevent this from happening. Any fly tipping should be reported to the district environmental health officer to investigate.
750. A concern is also raised about potential unauthorised access to the southern extension. The operators of the site have security measures in place in order to protect the valuable plant and machinery on site and this would be maintained and extended to the southern extension site.

751. Attention is drawn to the fact that landfilling is no longer the preferred method of disposing of waste, being at the bottom of the 'waste hierarchy'. The proposals do not make any allowances for landfilling the void created. It is noted that the only materials used for restoration purposes are overburden and interburden, which are both naturally occurring within the site.
752. As the proposals do not involve undermining properties, there would be no subsidence associated with the proposed development. Furthermore, the Quarries Regulations govern *inter alia* quarry design including aspects such as face profiles, to ensure long term stability. In this respect, substantial standoffs have been provided in the quarry design to nearby properties, including the two non-designated heritage assets, Balderton Grange and Cowtham House.
753. Attention is drawn to the fact that vibration limits imposed at nearby properties are based on amenity factors and are set well below the levels that are linked to causal damage to buildings and other structures. As such, the applicant has confirmed to the County Council that there would be no increase in premiums for building insurance above normal as a result of quarrying operations.

### **Other Options Considered**

754. In accordance with paragraph 2 of Schedule 4 of the 2017 EIA Regulations, where alternative options have been considered by the applicant, there is a requirement to include them in the Environmental Statement duly submitted in support of the application. In this respect, various alternatives to the proposed development have been considered and subsequently discounted by the applicant. These are summarised as follows:

#### No development

755. Minerals development by its very nature, has inherent constraints, in that it can only take place where mineral resources naturally occur. In a scenario where no development were to take place in the southern extension area, a beneficial and viable mineral resource would not be worked. In terms of the implications associated with this, it is noted that an alternative source of high-quality gypsum would have to be found and brought on-line on exhaustion of the current reserves at Bantycok.

#### Alternative method of working

756. The method of extracting gypsum at Bantycok Quarry is well established. Consequently, various practices and mitigation measures are already in place to ensure that any potential effects on residential amenity, particularly regarding those nearest sensitive receptors, are minimised.
757. In terms of current working practices, the established quarry activities demonstrate that, subject to planning conditions, the operations are capable of being carried out without significant material impact on local residential amenity;

and in compliance with mitigation measures. This demonstrates that the proposed development is capable of being worked in an acceptable way. Therefore, it is not considered necessary to propose an alternative method of working as operations are proposed to move into the proposed southern extension to Bantycok Quarry.

#### Alternative location

758. The adopted MLP Policy SP1 states that in terms of the strategic supply of minerals in Nottinghamshire the extension of existing sites is given priority and as such, alternative locations for gypsum extraction have not been considered as part of these proposals.
759. Geological investigations have demonstrated that additional high-grade gypsum reserves occur to the south of the current permitted quarry. As such, this provides a logical continuation of the current workings, particularly as the processing plant would be retained for the duration of any extended works. Given that the existing infrastructure is in place, this makes the proposed development a sustainable use of existing resources. Gypsum from the southern area can be transported internally to this area, in a straightforward continuation of existing working practices.

#### **Statutory and Policy Implications**

760. This report has been compiled after consideration of implications in respect of crime and disorder, data protection and information governance, finance, human resources, human rights, the NHS Constitution (public health services), the public sector equality duty, the safeguarding of children and adults at risk, service users, smarter working, and sustainability and the environment, and where such implications are material they are described below. Appropriate consultation has been undertaken and advice sought on these issues as required.

#### Crime and Disorder Implications

761. The development would extend an existing quarry, making use of established security measures within the site including the benefit of security lighting and CCTV coverage to the established plant site and ancillary staff facilities which would be retained for the duration of the works in the proposed southern extension to Bantycok.

#### Data Protection and Information Governance

762. Any member of the public who has made representations on this application has been informed that a copy of their representation, including their name and address, is publicly available and is retained for the period of the application and for a relevant period thereafter.

### Human Rights Implications

763. Relevant issues arising out of consideration of the Human Rights Act have been assessed. Rights under Article 8 (Right to Respect for Private and Family Life), Article 1 of the First Protocol (Protection of Property) and Article 6.1 (Right to a Fair Trial) are those to be considered and may be affected. The proposals have the potential to introduce impacts such as blasting vibration, dust, noise and traffic impacts upon the amenity of the nearest sensitive receptors to the site. However, these potential impacts need to be balanced against the wider benefits the proposals would provide such as supporting the economic viability of Bantymock Quarry and its associated manufacturing plant (Jericho Works) and providing for the continuity in the supply of a high-grade mineral resource of national importance. Members need to consider whether the benefits outweigh the potential impacts and reference should be made to the Observations section above in this consideration.

### Public Sector Equality Duty Implications

764. The report and its consideration of the planning application has been undertaken in compliance with the Public Sector Equality duty. Potential direct, indirect and cumulative impacts from the proposal have been considered equally to all nearby receptors and resulting from this there are no identified impacts to persons with a protected characteristic.

### Implications for Service Users

765. The working of the proposed southern extension to Bantymock Quarry would ensure the continuity in the supply of high-grade gypsum to established markets, including to the applicant's associated manufacturing plant at the adjacent Jericho Works.

### Implications for Sustainability and the Environment

766. These have been considered in the Observations section above, including all the environmental information contained within the EIA submitted with the application. All the environmental information contained within the EIA has been taken into account in the consideration of the proposals.
767. There are no financial, human resource, or children/adults at risk safeguarding implications. There are no implications for County Council service users.

## **Conclusion**

768. The proposals seek to maintain the production of high quality gypsum from the Bantymock site for a further 15 years to secure the life of the quarry and ensure its productive capacity is retained until 2044. If the southern extension is not granted planning permission, reserves would be exhausted by around 2024/25.



The proposed development would re-instate the 15 year landbank at the site based on an annual production rate of 400,000 tonnes per annum.

769. The recovery of permitted reserves in the southern extension would allow the site to continue to operate and maintain the existing economic and employment benefits it provides both in terms of direct employment and associated operations such as road haulage. It would maintain a vital release and supply of high grade gypsum into the Midlands region and support the continuing contribution of the site to the local and regional economy. Notably, the development would ensure that the demand-side for high purity gypsum in British Gypsum's own manufacturing plants in the Midlands including those in Nottinghamshire (Jericho Works and East Leake) would continue to be met through the extraction of all viable remaining reserves. The socio-economic benefits of the scheme are material in the determination of this planning application. As such, the proposed development is in compliance with the NPPF and the supporting Planning Practice Guidance.
770. The NPPF attaches 'great weight' to the benefits of mineral extraction; and the proposal site is situated within an allocated area for gypsum extraction. The application site remains consistent with land identified on the Policies Map – Inset 15 of the MLP despite not covering the entire allocation area. There are no constraints of any significance that would exclude this area from being excavated and worked for mineral extraction. There is therefore substantial policy support for the proposed development.
771. Technical assessments of key potential environmental impacts contained within the supporting Environmental Statement together with mitigation proposals and established management controls already operational at the working quarry, and assessed against policies in the development plan and the NPPF in the context of this planning application, have demonstrated that the site is capable of operating without giving rise to significant adverse environmental and amenity impacts, subject to a suite of planning conditions set out in Appendix 1 of this report. Measures would continue to be secured and ensure that any unavoidable noise, dust and particle emissions, and any blasting vibrations are capable of being controlled to within acceptable limits through suitable mitigation, and that any residual impacts would be negligible. The noise emissions from the quarry would continue to be in compliance with nationally set limits for minerals development set out within the Planning Practice Guidance. There would therefore be compliance with the environmental protection policies contained in the MLP, with the operation of the site being compliant with MLP Policies DM1 (Protecting Local Amenity), DM2 (Water Resources and Flood Risk), DM3 (Agricultural Land and Soil Quality), DM4 (Protection and Enhancement of Biodiversity and Geodiversity), DM5 (Landscape Character), DM6 (Historic Environment), DM7 (Public Access), DM8 (Cumulative Impact), DM9 (Highway Safety and Vehicle Movements/Routeing), DM10 (Airfield Safety), and DM12 (Restoration, Aftercare and After-use).
772. Whilst the southern extension proposal area would move operations closer to some sensitive receptors including some individual isolated farmsteads, any noise, dust and blasting/vibration impacts would be capable of operating within

acceptable limits for the avoidance of environmental and amenity impacts on these nearest sensitive receptors. In terms of material impact on local amenity and potential structural damage to property, the blasting assessment indicates that impacts are capable of being suitably controlled to within acceptable levels subject to planning controls. As such, the proposals would accord with adopted MLP Policy DM1, Policy DM5 of the Newark & Sherwood DPD, the NPPF and the supporting Planning Practice Guidance.

773. There would be some minor to moderate adverse changes to the landscape during mineral extraction but these would become minor to moderate beneficial changes upon the restoration of the site. Whilst it is acknowledged that there would be some visual impacts associated with the development, these have been minimised as far as is practicable and there would not be any significant long term negative visual effects from the development post restoration. The development therefore complies with MLP Policies DM1 and DM5.
774. Effective mitigation strategies covering protected species, reptiles and breeding birds already in place at the working quarry would be extended to cover the southern extension area. Whilst a section of the Shire Dyke Local Wildlife Site would be lost due to mineral extraction, it is a dry section of ditch and a 600m section of existing ditch would be enhanced to help mitigate the loss and provide valuable habitat for water vole. There are no statutory ecologically designated sites within the vicinity of the site.
775. An area of woodland planting and wildflower meadow would provide some early habitat creation at the southern end of the southern extension. Habitat creation during restoration would include further woodland and wildflower meadows, a substantial waterbody, marginal habitat and seasonal wet scrapes, wet grassland, species-rich hedgerows, and wet woodland. Some of the site would be returned back to agricultural use. The restoration scheme has been assessed against the Biodiversity Net Gain metric and compared to the existing approved restoration scheme, with a clear biodiversity net gain being demonstrated. Suitable aftercare periods will ensure that the habitats proposed reach a good standard in order to maximise those net gains. As such, the development would be compliant with adopted MLP Policies SP2 (Biodiversity-Led Restoration) and DM12 (Restoration, Aftercare and After-use).
776. A programme of archaeological works has been applied to the existing quarry since the 2006 minerals review permission first made this a requirement. This has preserved by record an extensive area of complex Iron-Age and Romano-British cultural landscape, building up a valuable record of settlement in this area. This non-designated heritage asset is considered to be of equivalent significance to a scheduled monument. In light of the archaeological interest already discovered at the site, a research-led mitigation strategy which maximises information gain and delivers public benefit is to be undertaken. A Research Framework and Agenda and Archaeological Management Plan would be secured by condition with Written Schemes of Investigation in place for each phase or cut. As such, the proposals would be in compliance with adopted MLP Policy DM6 (Historic Environment).

777. The proposed southern extension would involve quarrying in close proximity to two farmsteads which are non-designated heritage assets: Balderton Grange and Cowtham House. However, the scale of harm to, and significance of, these heritage assets is considered less than substantial and so it is considered that the proposed development complies with Policy DM6 of the MLP and the NPPF.
778. The 149.6 hectares of land in the southern extension includes 43.3 hectares of best and most versatile agricultural land. The restoration scheme includes the return of some land to agricultural use whilst remaining soils used for habitat creation would be used in a manner which maintains their quality. As such, the proposed development would be compliant with adopted MLP Policy DM3 (Agricultural Land and Soil Quality).
779. A small part of the south eastern part of the site is in Flood Zone 3 and amendments have been made to the proposed perimeter soil bunds to ensure that flood waters can flow freely and flood storage capacity can be maintained. Existing best practices would be maintained in order to minimise the risk of pollution. It is concluded that the proposed development together with the revised restoration scheme are capable of being carried out in compliance with Policy DM2 (Water Resources and Flood Risk) of the MLP.
780. Previous controls over HGV numbers would be carried forward under these proposals which restricts daily maximum HGV trips to 100 to provide the applicant with sufficient flexibility to respond to higher levels of demand for Bantymock's high-grade gypsum at their associated production works within the Midlands. Annually, the average figure would be 60 HGV trips per day. With the anticipated completion of the Newark Southern Relief Road in the near future, HGVs accessing and leaving the site would start to use this road in order to access the nearby strategic highway network (the A1 and A46). This, along with the controls on HGV numbers, would mitigate traffic impacts and protect residential amenity, particularly along the C3 road through the villages of Staunton in the Vale, Alverton, Orston and Elton. As such, the proposal complies with MLP Policy DM9 (Highway Safety and Vehicle Movements/Routeing).
781. The planning application and Environmental Statement have confirmed that blasting operations can be undertaken without impacting on nearby oil pipeline infrastructure, subject to a planning condition covering active vibration monitoring for blasting operations occurring within 400 metres of the oil pipeline, to ensure that there is no exceedance of acceptable PPV limits.
782. It is considered that there are no aspects of the new development that would affect the very low wildlife strike risk to gliding operations at RAF Syerston, such as the height of spoil heaps and blasting operations. There would be no notable water features until 2044 when the proposed southern extension is brought back to agricultural land and nature conservation uses. Even though this may attract birds in the future, this would be no worse than it was when the nearby former landfill site was in operation.

783. No significant adverse cumulative impacts have been identified in the environmental statement, and there is nothing to indicate that there would be any significant cumulative impacts associated with the proposals. As such, the proposed development would not be contrary to the requirements of adopted MLP Policy DM8 (Cumulative Impact).
784. Extant planning conditions attached to previous planning permission have proven to be effective and, subject to any required updates in light of the current environmental assessments contained in the Environmental Statement, would continue to be applied. To this effect, a suite of planning conditions is identified in Appendix 1 of this report and these would continue to regulate the operation of the site to an appropriate standard.
785. Monitoring measures covering blasting, noise and dust, already in place at Bantycok Quarry are considered by the MPA to be satisfactory and would continue into the future until mineral extraction ceases. These measures have proven to be effective and would continue to provide a robust monitoring regime capable of ensuring compliance with environmental and amenity planning controls attached to the planning permission.
786. The development is supported by the development plan and by the NPPF and the balance of material considerations support the granting of planning permission for the development. Environmental and residential amenity impacts are capable of being suitably controlled to acceptable levels subject to a series of planning conditions. It is concluded that there would be no significant adverse environmental effects nor amenity impacts on the nearest sensitive receptors as a result of the development. Overall, it is considered that any environmental impacts would be less than significant, subject to planning conditions, and these impacts would on balance be outweighed by the benefits derived from the development.

### **Statement of Positive and Proactive Engagement**

787. In determining this application, the Minerals Planning Authority has worked positively and proactively with the applicant by entering into pre-application discussions; encouraging pre-application community engagement which the applicant acceded to by holding a pre-application exhibition; and the scoping of the application. The proposals and the content of the Environmental Statement have been assessed against relevant Development Plan policies, the National Planning Policy Framework, including the accompanying technical guidance set out in the Planning Practice Guidance and European Regulations. The Minerals Planning Authority has identified all material considerations; forwarded consultation responses that may have been received in a timely manner; considered any valid representations received; liaised with consultees to resolve issues and progressed towards a timely determination of the application. Issues of concern have been raised with the applicant, such as impacts of flood risk, noise, conservation/biodiversity net gains, archaeology and built heritage, aerodrome safeguarding and oil and gas pipeline infrastructure and have been addressed through negotiation and acceptable amendments to the proposals

requested through two Regulation 25 submissions. The applicant has been given advance sight of the draft planning conditions. This approach has been in accordance with the requirement set out in the National Planning Policy Framework.

## **RECOMMENDATIONS**

788. It is RECOMMENDED that planning permission be granted subject to the conditions set out in Appendix 1. Members need to consider the issues set out in the report and resolve accordingly.

**ADRIAN SMITH**

**Corporate Director – Place**

### **Constitutional Comments**

Planning & Rights of Way Committee is the appropriate body to consider the contents of this report by virtue of its terms of reference.

[RHC 10/05/2022]

### **Financial Comments**

There are no specific financial implications arising directly from this report.

[SES 11.05.2022]

### **Background Papers Available for Inspection**

The application file is available for public inspection by virtue of the Local Government (Access to Information) Act 1985.

### **Electoral Division(s) and Member(s) Affected**

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