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INTRODUCTION

The statutory basis for EIA has been set out in Chapter 4 above. From this, it is noted that the purpose of an EIA is to assess the significant environmental effects likely to arise from a development. As such, it is not necessary to assess each and every effect that may arise.

- 10.1 This chapter sets out the topics that have been scoped out of the EIA, and the reasons why they have been scoped out.

SCOPING

- 10.2 As noted in Chapter 4 a formal scoping process has been undertaken with the LPA. This was set out in the 'Scoping Report' submitted to the LPA on 16th October 2019, which described the proposed scope of the EIA, and was accompanied by a request for a 'Scoping Opinion'. The LPA issued their Scoping Opinion on 3rd January 2020, attached as **Appendix 4/1** to Chapter 4.
- 10.3 From the scoping opinion, it is noted that there is an acceptance that Air Quality, Noise, Transport, Cultural Heritage, Climate Change, Accidents, Natural Disasters and Hazards and Population and Health can be scoped out. However, these issues should be covered in the wider supporting information provided with the planning application.

TOPICS SCOPED OUT OF THE EIA

- 10.4 The following paragraphs set out the reasons why the topics listed in paragraph 9.3 above have been scoped out of the EIA.

Air Quality

- 10.5 The effects of dust emissions typically affect residential amenity (through accumulation on surfaces for example) but can also affect ecological habitats if dust deposition is significant. Allied to this, health is often cited as an issue resulting from dust emissions.
- 10.6 Air quality in the vicinity of the proposed extension would be influenced to some degree by existing operations, together with local roads and to a lesser extent agricultural operations. Through the consideration of previous planning applications, consideration has been given to local air quality and the potential effects. This has culminated in the development of mitigation measures which have been captured in conditions attached to the extant planning permission.
- 10.7 The stripping of overburden and subsequent extraction of clay has the potential to generate dust emissions through the breakdown of materials and subsequent handling as they are removed from the strata and loaded into dump trucks. Allied to this, the transportation of both overburden and

clay by dump trucks on unsurfaced roads can generate dust. Table 10-1 below provides a summary of the potential dust generating site activities currently undertaken at the quarry.

Table 10-1
Description of Dust Generating Site Activities

Site Activity	Description
Site Preparation and Restoration	Stripping of topsoil, subsoil and overburden Restoration using imported inert materials including tipping and levelling
Mineral Extraction	Extraction of clay deposits
Materials Handling	Loading of excavated clay into dump trucks for transport to stockpile area Tipping of clay at stockpile area Removal of clay from stockpile and transfer to brickworks
On-Site Transportation	Transport of topsoil, subsoil, overburden and excavated clay to stockpile area Transport of plant, equipment and machinery Transportation across paved and unpaved haulage routes

- 10.8 The proposed development of the Southern Extension would not significantly affect the existing situation; it would not intensify operations or introduce any new operations or practices. Similarly the proposals do not significantly alter topography or vegetation between the operations and receptors. In this context areas of woodland bound the existing quarry and Southern Extension which would be unaffected by the proposed development. In the absence of the proposals, the operations identified in Table 9-1 would continue for the duration of the extant planning permission (i.e. up to August 2043).
- 10.9 As noted from Chapter 2, the closest residential receptors are located to the north-east (off Chestnut Street), approximately 300m from the closest boundary of the proposed extension and 220m from the boundary of the existing quarry. In addition, to the north of the quarry boundary are properties fronting Taylor Crescent, Duke Street and Tudor Court; these are around 415m from the proposed extension and around 70m to 80m from the current quarry boundary. As such, the proposed workings would be no closer than previously permitted under the extant planning permissions.
- 10.10 Guidance recommends identifying and mitigating the potential source(s) of dust emission. It is generally accepted that dust emissions typically ground (in the absence of mitigation) within 100m to 200m of the workings. Moreover, guidance on air quality assessment¹ indicates that assessment can be screened out where receptors are over 400m from the operational areas. As such, the

¹ IAQM (2016) *Guidance on the Assessment of Mineral Dust Impacts for Planning*. Institute of Air Quality Management, London

development of the Southern Extension would not exacerbate the current situation due to its limited lateral extent and location in relation to receptors.

- 10.11 The above receptors were all taken into account in previous submissions. The current planning permission contains condition 11, which requires measures to suppress dust to be agreed with the LPA.
- 10.12 Allied to this, the infilling operations would be regulated by an Environmental Permit which also addresses air quality, whilst any crushing operations would also be regulated by a permit issued by the council. In this context it is important to note Government's guidance that regulatory regimes should not duplicate each other. Moreover, by moving away from landfilling non-hazardous wastes removes the potential for odorous emissions being emitted from the Quarry.
- 10.13 Measures currently in place on site include those implemented in accordance with the conditions set out within the current planning permissions as part of the existing operations as well as best practice, are presented in Table 10-2.

Table 10-2
Existing Operational Control Measures / Dust Management

Activity	Dust Control Measures
Site Preparation and Restoration (including infilling operations)	Minimise drop heights during transfer of material. Water supply and sprays to be available and easily accessible during all soil stripping / reinstatement activities, and used as required during dry / windy weather conditions. Minimum use of heavy machinery across in-situ, undisturbed or restored areas of soil. Loading / unloading of material to be undertaken within the void and away from the site boundary where possible. Minimise areas exposed to wind erosion, stripping and restoration to be undertaken in distinct small areas. Soil replacement activities planned to take into consideration seasonal weather variations and seeding practises for restoration scheme. Avoid handling of soils during adverse weather conditions. Temporary cessation of soil stripping during periods of dry and windy weather.
Mineral Extraction	Material of inherently high moisture content and therefore low dust potential (clay). Extraction methods include use of a bulldozer and 360° hydraulic excavator to load dump trucks.
Materials Handling	Drop heights of excavated materials into dump trucks are minimised Excavated mineral transferred directly to stockpiling area (avoid double handling of material wherever possible). Water suppression to be available at all times in areas of material handling and stockpiling of mineral.
On-site Transportation	Use of water bowsers/spray systems to dampen haul roads.

Activity	Dust Control Measures
	No plant/vehicles shall cross any area of unstripped topsoil or subsoil or areas of loosened ground, except where unavoidable for the purposes of undertaking permitted operations. Speed limit usually controlled to 10mph. Vehicles are fitted with upswept exhausts. Haul roads are maintained to remove pot holes and dips which trap dust and cause plumes.
Stockpiles and Exposed Surfaces	Use of water bowsers/spray systems to dampen stockpiles. Temporary seeding of any exposed areas. Seeding of bunds. Stockpiles not to exceed heights of 3m for topsoil and 5m for subsoil. Storage mounds which remain in situ for more than six months or over winter shall be seeded with grass for three months of their construction and thereafter maintained free from weeds.
General	Dust filters fitted where appropriate on all plant and machinery. All operations to be temporarily suspended at times when operations on site give rise to unacceptable levels of dust emissions, such as adverse weather conditions.

- 10.14 In view of this it is difficult to see how the development of the Southern Extension would give rise to a significant effect on local air quality or the amenity of nearby residents, especially when taking the campaign basis of extraction into account.
- 10.15 As noted above, by changing the nature of the waste to be deposited in the workings, issues such as odour and bioaerosols are no longer relevant, with the proposals actually leading to a positive enhancement in terms of local air quality.
- 10.16 It is therefore considered that no further assessment is needed.

Cultural Heritage

- 10.17 The stripping of soils and the substrate lying immediately below the soil horizon can destroy archaeological features, the presence of which may be unknown. Similarly, the development of the proposed extension could impact upon the setting of any nearby heritage assets.
- 10.18 However, the footprint of the proposed extension has been disturbed through previous mineral operations; historically it has been used as a colliery tip and more recently been the subject of a tip reclamation project (recovering coal from the colliery tip). This is illustrated in Figure 10-1 below, being an aerial image from c. 2008.

Figure 10-1
Aerial Image c. 2008



- 10.19 This means that there is no likelihood of encountering any archaeological features.
- 10.20 As noted from Chapter 2 there is one Scheduled Monument within 2km of the site:
- Hallsteads moated site, Grimethorpe (approximately 1.1km to the north north-east of the existing quarry boundary, NGR SE 4206 0934)
- 10.21 In addition, there are 5 listed buildings within 2km of the extended quarry site, the closest of which (Bridge Farmhouse, NGR SE 4133 0931) is located around 800m to the north of the existing quarry boundary.
- 10.22 None of these heritage assets have a clear line of sight of the Southern Extension due to topography, vegetation of the built environment and so any development would be obscured. As such, the proposals would not have any indirect effects on the setting of any heritage assets.

Climate Change

- 10.23 The consideration of climate change is a new aspect introduced in the latest version of EIA Regulations. Under paragraph 4 of Schedule 4 an ES should (where relevant) contain “a description of the factors specified in regulation 4(2) likely to be significantly affected by the development: ... climate (for example greenhouse gas emissions, impacts relevant to adaptation) ...”. Paragraph 5 *ibid* adds that:

“A description of the likely significant effects of the development on the environment resulting from, inter alia: ...

(f) the impact of the project on climate (for example the nature and magnitude of greenhouse gas emissions) and the vulnerability of the project to climate change”.

- 10.24 In terms of the vulnerability of the project to climate change the key consideration is flood risk; this has been addressed in chapter 8 above (Water Environment).
- 10.25 In relation to emissions of carbon (in the form of CO₂), in the context of the proposals this can be in relation to direct emissions from large fossil fuelled (typically diesel) engines (Scope 1 emissions) and indirectly through the consumption of electricity (Scope 2 emissions).
- 10.26 The proposed development of the Southern Extension would not alter the current working practices and in particular introduce any significant numbers of new plant and machinery. As such carbon emissions from the exhausts of plant and machinery would largely remain the same, be it as new plant and machinery is introduced, their engines will be more efficient. Moreover, during the life of the development, alternatives to diesel powered plant may come forward, such as electric (battery) and hydrogen powered. However, such plant is likely to be at least ten years away from commercial deployment.
- 10.27 The engines of plant used on site would be operated to strict emissions limits. Moreover, the emissions would be intermittent and short term. Given the scale of the development, particularly in comparison to the approved development, it is considered that the likelihood for the development to significantly affect climate change is low, if at all.
- 10.28 In view of this it is not considered that the proposals would have any significant or noticeable effect on climate change through emissions. As such it is considered that no further assessment is needed.

Noise

- 10.29 The operation of plant and machinery within the workings, either through extraction (point sources) or transporting overburden/clay (line sources) generates noise.
- 10.30 Noise levels in the area are likely to be influenced by existing consented operations within the site, and to a lesser extent highway noise from roads in the area. As for Air Quality considered above, consideration of previous planning applications, consideration has been given to local noise climate and the potential effects. This has culminated in the development of mitigation measures which have been captured in conditions attached to the extant planning permission.
- 10.31 Good site management practices and other specific measures provide noise mitigation. These measures include the following:
- activities to be undertaken in locations where noise attenuation from landforms maximise the benefit to receptors;

- the internal haul road to be kept clean and maintained in a good state of repair to avoid unwanted rattle and 'body slap' from vehicles;
- all plant to have noise emission levels that comply with the limiting levels defined in European Commission Directive 2000/14/EC2 (and United Kingdom Statutory Instrument 2001/17013) and any subsequent amendments;
- consideration to the recommendations set out in Annex B of BS5228-1:2009+A1:2014 which respect to noise sources, remedies and their effectiveness, i.e. methods of reducing noise levels from plant, such as the use of attenuators, the use of acoustic enclosures and/or the replacement of inherently noise plant by less noisy alternatives;
- plant to be operated in a proper manner with respect to minimising noise emissions, i.e. minimisation of drop heights, no unnecessary revving of engines, etc.;
- plant to be started up sequentially rather than all together;
- plant to be subject to regular maintenance and kept in good working order to meet manufacturers' noise rating levels;
- plant that is operated intermittently to be shut down when not in use; and
- reversing alarms to incorporate one of the following features where practicable – directional sounders, broadband signals, self-adjusting sounders or flashing warning lights – to minimise noise and nuisance.

10.32 On the whole, the proposed development of the Southern Extension would not significantly affect the existing situation.

10.33 As noted above, the closest residential receptors are located to the north east (off Chestnut Street), approximately 300m from the closest boundary of the proposed extension and 220m from the boundary of the existing quarry. In addition, to the north of the quarry boundary are properties fronting Taylor Crescent, Duke Street and Tudor Court; these are around 415m from the proposed extension and around 70m to 80m from the current quarry boundary. As such, the proposed workings would be no closer than previously permitted. Overall therefore, the proposed extension is situated further away from receptors than the approved working area. turning to the proposed change to the restoration scheme, this means that all operations would always be within the void and would not reach original ground levels. Accordingly, operations would be shielded by the quarry faces.

10.34 Noise can have an adverse effect on the amenity of residents living in nearby receptors if noise levels generated from the quarry are too high. In this respect, guidance (such as PPG on minerals)

² Directive 2000/14/EC – Noise – Equipment for Use Outdoors (of the European Parliament of the Council of 8 May 2000 on the approximation of the laws of the Member States relating to noise emission in the environment by equipment for use outdoors)

³ The Noise Emission in the Environment by Equipment for use Outdoors Regulations 2001

sets out limits that should not be exceeded at receptors. Similarly, the extant planning permission provides noise limits at noise sensitive receptors.

Transportation

- 10.35 The only HGV movements that would occur would be in relation to the importation of inert waste. Such movements are already permitted (be it for non-hazardous wastes). The proposed scheme does not seek to increase the volume of vehicles entering and leaving the quarry or extend the duration that such movements would occur. It is therefore considered that the proposed development would not result in any additional effects on the local transport network.
- 10.36 On the basis that the application is not for new development, i.e. the proposed vehicle movements will remain as consented, the likelihood of any significant effects occurring are low.

Vulnerability to Accidents and Disasters

- 10.37 Paragraph 4(4) of the EIA Regulations indicates that an EIA should include the expected effects deriving from the vulnerability of the development to risks, so far as relevant to the development, of major accidents and disasters (emphasis added). Paragraph 8 to Schedule 4 of the EIA Regulations requires EIA Reports to include the following:

“A description of the expected significant adverse effects of the development on the environment deriving from the vulnerability of the development to risks of major accidents and/or disasters which are relevant to the project concerned. Relevant information available and obtained through risk assessments pursuant to legislation of the European Union such as Directive 2012/18/EU of the European Parliament and of the Council or Council Directive 2009/71/Euratom or relevant assessments may be used for this purpose provided that the requirements of this Directive are met. Where appropriate, this description should include measures envisaged to prevent or mitigate the significant adverse effects of such events on the environment and details of the preparedness for and proposed response to such emergencies”.

Terminology

Accident

- 10.38 The following definition follows advice given by the Health and Safety Executive (HSE)⁴ with regard to major accidents:

“An incident will be a major accident if it results in serious danger, whether realised or potential, to the natural or built environment. The effect may be immediate or delayed and may sometimes be relatively long-lasting but not necessarily irreversible. Operators should consider the potential for widespread loss or damage to the general environment as well as the risk of adverse effects on a rare, unique or otherwise valued component of our natural or built environment.”

⁴ The Control of Major Accident Hazards Regulations 2015

- 10.39 The advice goes on to state: *“Serious danger to the environment includes accidents with the potential to result in:*
- (a) the death or adverse effects on local populations of species or organisms, with lower thresholds for high-value or protected species;*
 - (b) contamination of drinking water supplies, ground or groundwater;*
 - (c) damage to designated areas, habitats or populations of species within the areas;*
 - (d) damage to listed buildings;*
 - (e) damage to widespread habitats;*
 - (f) damage to the marine or aquatic environment”.*

Disaster

- 10.40 The definition of disaster is normally considered to involve a calamitous event, especially one occurring suddenly and causing great loss of life, damage, or hardship. The International Federation of Red Cross and Red Crescent Societies (IFRC) considers a disaster to be *“a sudden, calamitous event that seriously disrupts the functioning of a community or society and causes human, material, and economic or environmental losses that exceed the community’s or society’s ability to cope using its own resources. Though often caused by nature, disasters can have human origins”*. A disaster can therefore be divided into two basic groups: natural and man-made. Among the natural disasters are earthquakes, volcanoes, hurricanes, floods, and fires. Among the man-made disasters are war, pollution, nuclear explosions, fires, hazardous materials exposures, explosions, and transportation accidents. Disasters can also include malicious intent.

Man-made’ incidents

- 10.41 With the exception of the brickworks there are no major installations in the vicinity of the quarry. The presence of the brickworks would not give rise to any significant concerns over the ability to develop the proposed extension in the unlikely event of a major accident at the works. Similarly, the proposed extension is unlikely to have any effect on the brickworks through issues such as ground instability or drainage.
- 10.42 There are also no major road, rail or electricity, gas or water transmission infrastructure close to the proposed extension.
- 10.43 The BGS GeoIndex indicates that there are few records of earthquakes (modern recorded or historic) in the vicinity of the quarry. The nearest record (1990, magnitude of 1.8) is located to the west of South Kirkby, approximately 3.1km to the north-east of the quarry site boundary. A further record (1986, magnitude 1.4) exists around 4km to the north, located to the north of Shafton.
- 10.44 The nature of the development is not susceptible to natural hazards (typically related to extreme weather events such as hurricane/tornado, flooding, heavy snowfall). Allied to this, mineral

workings are subject to geotechnical assessment on a regular basis, and workings are designed having regard to geotechnical conditions. This reduces the risk of the proposed development on neighbouring land uses, particularly residential areas.

- 10.45 The following have been scoped out of the assessment due to the low probability of these events occurring:
- major transport accidents;
 - loss of critical infrastructure; and
 - industrial accidents.
- 10.46 In addition, the nature of the proposed development is 'low-tech' and is therefore not considered vulnerable to cyber-attack or similar web-based incidents.
- 10.47 The proposed development does involve the storage of fuel, oils and lubricants. Whilst each of these has the potential to give rise to an accident which could harm humans or the environment, legislative controls are in place to minimise the risk. As such, given that the planning system is not to duplicate other controls these aspects have similarly been scoped out. This is also illustrated by the lack of accidents involving the storage of such materials.

Naturally-occurring events

- 10.48 The location of the application site is such that a number of naturally occurring events would not occur, this includes:
- Tsunami;
 - Volcanoes;
 - drought;
 - fire; and
 - heat wave.
- 10.49 The site may experience the following naturally occurring events, but it is considered that there is little, if any likelihood of a significant effect occurring, either as a result of vulnerability within the site, or effects off site as a result of:
- high winds;
 - heavy rainfall;
 - heavy snowfall;
 - extreme low temperatures; and

- earthquake.

10.50 As such it is considered that no further consideration needs to be given to vulnerability to accidents and disasters.