Cleveland Potash Ltd

BOULBY MINE

EIA Scoping Request



JUNE 2026

PUBLIC

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EIA Scoping Request

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1 INTRODUCTION

1.1 THE CLIENT

1.1.1. Cleveland Potash Limited (under the brand name of ICL Boulby) is a business unit of ICL Fertilizers, and produces and supplies polyhalite for agricultural purposes and salt for a variety of uses, primarily for road de-icing purposes. ICL Boulby owns the world's only operational polyhalite mine at Boulby in the North York Moors National Park, from which around a million tonnes of polyhalite and more than half a million tonnes of salt is extracted each year.

1.2 THE PROJECT

1.2.1. Boulby Mine is operated under a planning permission which was granted in 2023, and provides a 25 year operational timeframe for the mine, with site clearance and restoration to take place from 2048. As part of this permission, Muriate of Potash (MoP) is permitted to be imported to the site, to be blended with polyhalite, to create various fertiliser products. This importation is permitted only until the end of 2027, and after this date the importation of MoP is required to cease, and various buildings and structures are required to be deconstructed with the land they are located on restored, primarily to agricultural land.

1.2.2. As described further in Chapter 2, ICL Boulby now require the importation of MoP to continue and some of these buildings and structures to remain on site from 2027 through to the end of the current permission in 2048. Due to the way the current planning permission is worded, the current consent documents cannot be varied, and a new planning permission covering all operational and decommissioning activities at the mine will be required to achieve these changes.

1.3 THE AGENT

WSP UK Limited (WSP) has been commissioned to prepare this report. It requests a ‘Scoping Opinion’ from the North York Moors National Park Authority (NYMNPA) in relation to a proposal to continue the operation of Boulby Mine, but without some of the requirements included within the existing planning permission for the mine’s operations.

WSP is one of the world’s leading engineering and professional services firms, providing strategic, environmental, technical and commercial due diligence and advisory services. Our 83,000 global employees, of which nearly 12,000 are based in the UK, work on projects of all sizes and scales in the built and natural environments. Our clients span various sectors including mining, power, industry, and transportation, all of whom operate in some of the most highly regulated industries in the world. We are a trusted partner and collaborate with our clients as an integral part of their capabilities.

The proposed EIA will be carried out by WSP for ICL Boulby.

1.4 EIA SCREENING

1.4.1. As described in Part 2 the Town and County Planning (Environmental Impact Assessment) Regulations 2017 (the EIA Regulations), a request can be made to a local planning authority for an opinion as to whether a development proposal requires an EIA (a screening opinion).

ICL Boulby acknowledge that its proposals would be for a new permission for an underground mine, which falls under Schedule 2, 2(b) of the EIA regulations. Developments falling within Schedule 2 must be considered against the selection criteria in Schedule 3 of the EIA Regulations in order to determine if they are EIA development or not. These Schedule 3 criteria include matters such as the scale of the development, the sensitivity of its location and the nature of the impacts. Due to the size of the mine and its location within a National Park, ICL Boulby are therefore offering an Environmental Statement (which documents an EIA) to accompany the application to NYMNPA and therefore a screening opinion is not necessary.

1.5 FORMAT OF THE SCOPING REPORT

1.5.1. After this introductory section, the remaining elements of this report will be structured in the following way:

- Description of the development.
- The EIA process.
- The summary of the scope of the assessment.
- Appendices

2 DESCRIPTION OF THE DEVELOPMENT

2.1 BACKGROUND TO BOULBY MINE

2.1.1. Boulby Mine is an underground mine, from which polyhalite and salt are currently extracted. The surface site (the Mine Site) is located between the villages of Staithes and Easington, just inside the northern boundary of the North York Moors National Park. See Figures 2.1 and 2.2.

2.1.2. The mine was originally granted permission in 1968 following a public inquiry, and originally extracted sylvinite (from which forms of potash were produced) and salt. Production commenced from the mine in 1973. The introduction of the Environment Act 1995 required a planning application to be submitted for the review of the original permission, and as a result of that review, the mine secured a new planning permission in 1998 which had an expiration date of 2023.

2.1.3. The current planning permission for the mine was granted in 2023, extending the lifespan of the mine until 2048.

2.1.4. During the lifespan of the 1998 permission, ICL Boulby confirmed that polyhalite could be extracted under the terms of the permission, and extraction of polyhalite commenced in 2011, alongside sylvinite and salt. In 2018, extraction of sylvinite ceased and the mine has operated as a polyhalite and salt mine only since then. The current permission allows the extraction of polyhalite and salt, sylvinite is no longer permitted to be extracted.

2.1.5. The mine is also home to the Boulby Underground Laboratory, operated by the UK's Science & Technology Facilities Council in collaboration with ICL Boulby. The Laboratory conducts research into dark matter, and includes both surface and underground facilities.

2.2 LOCATION AND SURROUNDINGS

2.2.1. The mine site is located on flat ground surrounded by rising land to the south and west. To the west, the land rises steeply up to the cliff tops at Boulby and to the south, the land rises more gently up towards the moorland plateau. To the north, the mine is located a few hundred metres away from the coastal cliffs and to the east, the land follows the coast to the villages of Dalehouse and Staithes. Land in the immediate surrounding area is mainly used for agriculture purposes, as well as including woodland and small settlements.

2.2.2. The nearest settlements (as measured from the Boulby Mine boundary shown in Figure 2.1) are as follows:

- Staithes 1.55 km to the east;
- Dalehouse 1.15 km to the east;
- Roxby 1.55 km to the south;
- Easington 1.27 km to the south west; and
- Boulby 0.54 km to the west.

2.2.3. Road access is taken directly from the A174 to the north of the mine and the mine is served by its own rail line which leads to port facilities on Teesside.

2.3 CURRENT SITE OPERATIONS

2.3.1. The mine currently has planning permission to extract polyhalite and salt. Polyhalite can be sold as a raw product, which is sold by ICL Boulby under its PolySulphate brand, or used to create other

forms of fertilisers. Currently ICL's chief product from this process is their polyhalite and MoP blend, known as PotashpluS. Salt is extracted in the form of rock salt and is used primarily as road salt but also in certain agricultural practices.

2.3.2. Minerals are extracted from seams ranging between 1,000 m and 1,300 m below the surface. Permission exists to extract these minerals from a large area beneath the North Sea, with a smaller underground area underneath the National Park to support the mine shafts, underground logistics, transportation tunnels and the Boulby Underground Laboratory. No extraction takes place from underneath the National Park (other than anything needed for underground roadway construction or underground maintenance works). Once brought to the surface, there are facilities available to crush and screen the minerals and to process the polyhalite with the imported MoP to form PotashpluS. The polyhalite products are taken from the site via rail and there is an allowance for a restricted number of HGV deliveries from the mine, which are mostly used for delivering salt products along with a smaller amount of polyhalite products. The importation of MoP takes place by HGVs, and these operate within the restricted HGV numbers

2.3.3. The existing Mine Site plan is shown at Figure 2.2. This shows the centre of the site containing the surface mine buildings and plant and then a buffer zone around this of open fields and woodland planting. A small piece of land to the north, on the coastal cliff top, also forms part of the Mine Site and contains facilities for the seawater intake and discharge operations. Further details of the mine's operations are provided below.

2.4 DESCRIPTION OF MINE

2.4.1. The Mine Site covers an area of approximately 32 hectares. The site facilities include two mine shafts and headgear, the processing plant and product storage silos. Other buildings house workshops, stores, laboratories and offices. The site has a dedicated rail loading facility and rail link to Teesside for the transport of products for export and storage. Road access is provided directly from the A174 which passes the site to the north.

UNDERGROUND MINING AREA

2.4.2. Historically, ICL had planning consent to undertake mining within a large onshore area covering land beneath both the National Park and Redcar and Cleveland Borough Council areas. This area extended from Brotton in the west, to the outskirts of Whitby in the east, and generally by the A171 to the south. Much of this onshore area was however excluded from the current planning permission, with only an area from beneath the Mine Site in the west, to Runswick Bay in the east and around the area of the B1266 in the south. This reduced area is primarily to allow the operation of the shafts and mine logistics from an area directly beneath the Mine Site (also including the Boulby Underground Laboratory) and the transportation tunnels from this working area to the operational working faces out underneath the North Sea. The remaining land to the east and south is retained to allow maintenance to take place on the historic mines voids in the area, relating to subsidence control and ground water management. No mineral extraction is permitted from this onshore area (other than anything needed for underground roadway construction or underground maintenance works).

2.4.3. To the north, working takes place offshore, under the North Sea bed, under a licence issued by the Crown Estate. A restricted zone exists along the coast, where extraction is only permitted with the prior approval of the NYMNPA.

NATURE OF THE DEPOSIT

2.4.4. Polyhalite is be extracted from the massive polyhalite beds within the upper and middle Z2 Zechstein evaporite subcycles. The main constituents of these beds include polyhalite (potassium, magnesium, calcium sulphate with an average polyhalite content of around 85-89%), halite (salt) beds with thicknesses up to 5m above the polyhalite and extending to >40m thickness in the layers below. Some areas also contain significant thicknesses of anhydrite as both a mixture with polyhalite and as monomineralic beds up to 30m in thickness at the base of the polyhalite mineralization. The depth of the massive polyhalite beds varies from 700m in the north west to 1350m further to the south. The average dip of the seam is 1:20 down to the south east.

2.4.5. Salt is extracted from the Boulby Halite seam which is a relatively pure bed of halite and attains a maximum thickness of about 40 m.

2.4.6. The geological information required to allow ICL Boulby to plan future developments is now obtained from horizontal directionally controlled boreholes drilled from the underground workings. This is further refined by short boreholes drilled immediately in advance of the working face.

METHOD OF EXTRACTION

2.4.7. Underground access to the workings would continue to be gained via the two existing mine shafts, No1 and No2 Shaft which are used to transport ore, and men and materials respectively. The proposed method of extraction will be by pillar and stall methods using strata control techniques. This method is designed to provide an optimum balance between extraction and stability of the workings.

2.4.8. Different dimensions of pillars and working panels can be used depending on the geological conditions encountered in the different minerals mined. The polyhalite and salt seams are more stable over longer periods of time than the historically worked sylvinite seams, and are less prone to future collapse (sylvinite is more elastic than salt and polyhalite and the sylvinite workings were designed to collapse (to a certain degree) in on themselves after working, preventing sudden rock falls and restricting underground dangers and surface subsidence events).

2.4.9. Extraction of mineral will be undertaken using mechanised full face mining techniques, using an advance and retreat methodology. The mine will typically operate with three working panels, with a combined weekly polyhalite output averaging 18,000 tonnes. The layout of the working panels within each district is determined on a planned basis according to geological, geotechnical and survey-based data. The data acquisition is supported by a comprehensive drilling programme.

PROCESSING

The polyhalite ore is hoisted to surface and is received by the polyhalite crushing and screening plant. This plant consists of a number of screening stages together with a crushing stage to reduce the size of the larger particles. The combination of crushing and screening produces two primary products - a granular grade product and a standard (fine) grade product.

The standard grade polyhalite can be further processed alongside side other fertiliser products, to create different ‘blends’, providing differing nutrient properties. This is primarily undertaken at Boulby Mine by blending with MoP. The polyhalite and MoP is combined together in a compaction process to create a mixed granular grade product.

Salt products are produced by crushing and screening only, with no further processing required.

CPL currently extracts approximately 1.0 million tonnes of polyhalite and 300,000-500,000 tonnes of salt per annum, although the mine has capacity to increase production to around 3 million tonnes of total product per annum. The factors relevant to the mine's overall capacity include the transport capacity of the mine shafts, processing facilities, transport capabilities and environmental regulatory controls.

TRANSPORT

2.4.10. Processed materials are despatched from the site by rail and by road. Road exports are limited by the terms of the legal agreement which accompanies the mine's planning permission to a maximum of 150,000 tonnes in any 12 month period, and to a maximum of 66 loads of product leaving the site each day. The routes used by HGVs delivering the mine's product are also defined under the legal agreement, with minor roads in the vicinity of the mine being avoided unless for specific delivery purposes. The A174, north and south, is the therefore the principle route which HGVs use to reach the wider highway network.

2.4.11. Importation of MoP to the Mine Site also takes place by HGV, with all deliveries being within the 150,000 tonne / 66 HGV restrictions. There are no rail loading facilities (at Tees Dock) or rail off-loading facilities (at the Mine Site) to allow importation via rail.

2.4.12. All other products are despatched using the existing rail link to Teesside and Tees Dock. Train wagons are loaded at the rail loading facility to the west of the Mine Site. They then travel on a private rail line (owned by ICL Boulby) to Skinningrove where the track joins a line owned by Network Rail. The track is shared from this point to Saltburn by rail services for the British Steel plant at Skinningrove, and also from Saltburn by passenger rail services into Teesside.

2.4.13. The majority of workers travel to the site by car, which is necessary due to the rural location and the shift working patterns in place, and the mine site includes car parking areas for workers. All deliveries are also brought to the site by road.

BUILDINGS, STRUCTURES AND LANDSCAPING

2.4.14. The mine site contains a range of buildings and structures which, in simple terms consist of the following (from south to north across the mine site):

- Underground services: helipad (for emergency use), car parking, workers amenities, man shaft, surface fan house and winder house;
- Technical services and fabrication bays;
- Dark matter research building,
- Substation and transformers;
- Rock shaft and vent house;
- Raw ore, salt, polyhalite and finished product storage;
- Salt and polyhalite plant buildings;
- Sewage plant;
- Treatment plant building;
- Rail loading facility;
- Water interceptor pit;
- General stores and engineering services;
- Sports dome (for workers)
- Gatehouse, car parking and administration building;
- Sea water reservoir.

2.4.15. Also connected to the mine site are buildings connected to the seawater pipeline which are located close to the coastal cliff line to the north of the site. These include transformers, shaft and wind house and related plant.

2.4.16. Since 2023, a number of previous structures have been demolished and cleared from the Mine Site including the raw ore surge bunker (the 2000 tonnes bunker), the slimes thickeners (previously used in sylvinite processing), the combined heat and power plant and a range of ancillary buildings adjacent to the Treatment Plant Building.

UTILITIES

2.4.17. Annual Boulby electricity consumption will be in the region of 87 GWh, with underground pumping and ventilation accounting for 49% of this total. Polyhalite and PotashpluS processing accounted for 16% of consumption in 2025.

2.4.18. The driers used in the surface processing facilities will consume in the region of 23 GWh of natural gas per annum.

2.4.19. Solar panels have been installed in the gatehouse.

2.4.20. The site is supplied by fresh water from the mains supply. Annual consumption is typically of the order of 470,000m^3, with a quarter of this used underground and the remainder used in the plant and surface facilities.

2.4.21. Seawater is extracted at a rate of up to 700m^3 per day into a sea brine reservoir and is mainly used for cooling, scrubbing and as a transport medium for site combined effluent disposal (see further details below).

WASTES GENERATED ON SITE

2.4.22. 60% of waste generated on site is recycled which includes plastic, paper, glass, aluminium, aerosols, scrap metal and cardboard. Opportunities for more recycling streams are constantly being sought. Waste management on site will continue to ensure that wastes are segregated prior to removal by licensed contractors for recycling or disposal.

HOURS OF WORKING

2.4.23. Mining operations and processing are undertaken continuously, i.e. 24 hours per day, 7 days per week.

2.4.24. Transport of products by road (see below) only takes place between 07:30 and 19:00 from Monday to Saturday.

WATER DISPOSAL

Surface and foul water

2.4.25. The surface mine operations are located on a hill side. Prior to the construction of the mine, three small natural valleys ran through the site providing natural surface drainage. The valleys were partially filled and the ground levelled during mine construction with the streams from these valleys being culverted. The working site itself is bunded and surface water run-off from the site is diverted through the on-site drainage system into the interceptor in the north eastern corner of the site. Water from the culverted streams also feeds into the interceptor. Foulwater flows from the site pass through an onsite sewage treatment plant before feeding into the interceptor.

2.4.26. All surface water run-off, as well as all treated foulwater, therefore flows through the site's drainage system.

2.4.27. The contents of the interceptor pit are pumped into the effluent stream, which already contains a mixture of mine brine and plant effluent, and this is mixed with sea water to produce a diluted effluent stream for discharge. The interceptor pit has a capacity of approximately 2,500 m^3, designed to accommodate runoff and stream flow at all but the highest rainfall levels. At times of extreme rainfall events, the interceptor pit is designed to overflow with the heavily diluted waters flowing down the hillside to the east and into the Easington Beck. The high level of dilution is designed so that no pollution events can occur from this process, and this has been confirmed from water quality monitoring work undertake in the Easington Beck in recent years.

Groundwater

2.4.28. Underground, a pathway has been created for saline groundwater from the overlying Sherwood Sandstone to enter the mine workings due to previous extraction activity. This water is pumped out of the mine and joins the effluent stream for discharge. The Sherwood Sandstone and Magnesian Limestone are classified as major aquifers, however, groundwater quality in these aquifers is generally poor within the application area and they are not utilised for water supply purposes.

2.4.29. There are several groundwater abstractors located within the area of the mine workings, with the source being permeable sandstones within the Lias or sand and gravel layers within the drift deposits. These minor aquifers will not be in hydraulic continuity with the mine workings due to the presence of significant thicknesses of low permeability strata above the potash seam. Although salt and polyhalite are stored onsite in stockpiles exposed to the elements there is a very low potential for leaching of salts to groundwater because of the site's location on low permeability boulder clay. Therefore no de-watering or pollution of these shallow groundwater resources occur.

EFFLUENT DISPOSAL

2.4.30. The Mine's effluent disposal system was originally designed to accommodate the disposal of the treated surface waters, pumped groundwaters, and tailings from the sylvinite processing operations. These tailings were mixed with sea water to form a very dilute suspended solids slurry and then added to the effluent stream with discharge being made via pipeline to the seabed. There is no longer a need to manage tailings from the mine (as these arose from the processing of sylvinite ore). Polyhalite and salt do not require a concentration process, and therefore do not generate tailings. However, the surface and groundwater streams are still discharged by mixing with sea waters and discharging via the same pipeline route to the North Sea, and this discharge is subject to monitoring.

ATMOSPHERIC EMISSIONS

2.4.31. The processing of polyhalite and salt at Cleveland Potash Limited gives rise to a number of atmospheric emissions, including:

- the emission of combustion gases and particulate material from three product driers, which are vented to atmosphere via an 87.5 m high dryer stack;
- fugitive emissions of dust.

2.4.32. It is proposed that emissions to atmosphere from the various processes carried out at the mine will continue to be made subject to regulations imposed by the Environmental Protection Act 1990 Part 1. The surface operations at the site are classified as a Part B process and are regulated by Redcar and Cleveland Borough Council under Authorisation reference MP-CPL-209.

2.4.33. There is also a permit under the UK ETS Scheme which relates specifically to gas usage by the driers and fossil fuel use by stationary plant on site.

2.4.34. The site is subject to emission limits and controls for particulate matter, under the existing Part B Authorisation. Compliance with the specified limits is demonstrated through a comprehensive monitoring programme as detailed in the authorisation. Ongoing visual monitoring is conducted by CPL personnel; particulate stack emissions are determined annually by external consultants.

EMPLOYMENT

Currently, ICL Boulby employ 552 personnel at Boulby Mine, including underground engineers and production staff, surface plant engineers and production staff and staff in the management, administration, training and safety departments.

2.5 PROPOSALS

2.5.1. ICL Boulby are seeking to replace their existing planning permission with an amended version which would allow the mine to continue to operate as it currently does in 2026, for the period up to 2048 (the year the existing planning permission will expire). The current planning permission requires the importation of MoP to cease, and a number of buildings and structures to be removed, by the end of 2027. However, these activities are required to continue in order for the mining operation at Boulby Mine to remain viable. Due to the way the current permission is worded, it cannot be varied to allow the changes needed, so a new permission is therefore required. The new permission will therefore seek to continue the current 2026 operations through to 2048. This will involve the extraction of polyhalite and salt and the retention and operation of all current surface installations, buildings, plants etc. The extent of the underground area which could be mined would remain the same as is currently permitted, with extraction all taking place in the offshore area.

2.5.2. The proposal would not see any of the permitted capacities, which currently limit the output of the mine, increased.

2.5.3. ICL Boulby has been extracting polyhalite since 2011, with extraction rates increasing over this time to around 1 million tonnes per annum. Work has been ongoing since 2011 to develop marketable products from the polyhalite and ICL Boulby now has established principle products of polyhalite (marketed as PolySulphate due to the sulphur content) and PotashpluS. PotashpluS is a blend of polyhalite and MoP. Sylvinite extraction and the production of MoP on site at Boulby Mine ceased in 2018 as access to sylvinite resources would have required mining through a major geological fault. MoP therefore was imported, through shipping to Tees Dock from other ICL facilities, and then by HGV to the Mine Site. This importation is only permitted until the end of 2027 in the current planning permission which was intended to provide time to allow the product development to be refined, before the PotashpluS blending process could be moved to a site away from the National Park. This is no longer considered a viable option however, due to both a lack of available land that can link with ICL's current facilities and logistics in the UK and the cost of developing a new facility away from these facilities being economically prohibitive.

2.5.4. ICL has access to sufficient polyhalite resources to extract across the period to 2048.

2.5.5. Salt would continue to be mined to suit market demand and extraction capabilities.

POTENTIAL MITIGATION PROPOSALS

2.5.6. ICL Boulby recognise that the landscape and visual impacts of the existing mine site create a significant, adverse impact on the landscape of the National Park. Work has been undertaken at

the Mine Site since 2023 to consolidate the building and structures needed on site. Since this time, the raw ore surge bunker (the 2000 tonnes bunker), the slimes thickeners (previously used in sylvinite processing), the combined heat and power plant and a range of ancillary buildings adjacent to the Treatment Plant Building have been removed from the site. Due to the conclusion of the product development process over the years since 2011, the current operational site contains all of the buildings and structures required for continued operation and no further removal of any buildings or structures can take place. Further mitigation will therefore consider the appearance and/or screening of the structures that will remain on site.

2.5.7. Any landscaping proposals developed would take place alongside the continuation of the management of the existing woodland areas within the mine site and proposals to provide Biodiversity Net Gain.

2.6 SITE OPERATIONS TO COMPLETION AND RESTORATION

2.6.1. It is proposed that a detailed restoration scheme would be developed and submitted to NYMNPA closer to the end date of any permission granted, to allow for a scheme which reflects the best use of land at that time and the most up to date guidance to be followed in its design. As with the currently approved outline restoration plans though, it is likely that the site would be restored to primarily agricultural and woodland uses.

2.6.2. The plant and above ground structures will be decommissioned and demolished in accordance with the relevant legislation and best practice guidance available at the time of closure. All reasonable attempts will be made to reuse and recycle materials arising from the demolition of the structures and hardstanding. The shafts will be decommissioned and backfilled with inert material, plugged and sealed with a suitable reinforced concrete cap.

2.6.3. Restoration of the site will include regrading of the existing level plateau area to form a landform in keeping with the surrounding countryside. Subsoil and topsoil materials will be placed and cultivated, in accordance with the standards and requirements of the type of end-use proposed. The type and nature of woodlands, planting, field boundaries etc. will be agreed with NYMNPA in order to enhance the landscape and ecological value of this part of the National Park.

2.6.4. Consideration will also be given to the inclusion of public rights of way within the restored site to link up with the surrounding rights of way network, and to whether any other recreational assets could be designed into the restoration design.

2.6.5. ICL Boulby will also provide aftercare to the site for an agreed period following completion of the restoration scheme.

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524000 523000 522000 521000 520000 519000 518000 517000 516000 515000 514000 513000 512000 511000 510000 509000 508000 507000 506000 505000

Key

Boulby Mine boundary

Proposed planning boundary

0 1 2 3 4 km

Scale at A3:1:75,000

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Boulby Mine New Development
Scoping Report

Figure 2.1
Location Plan
Mine Site plus proposed onshore underground area

May 2026

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Key

Boulby Mine boundary

Operational area

0 100 200 300 400 500 600 m

Scale at A3:1:10,000

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Boulby Mine New Development
Scoping Report

Figure 2.2
Site Plan
Mine Site: operational area plus landownership

May 2026

Workspace - Boulby Mine

3 EIA METHODOLOGY

3.1 INTRODUCTION

3.1.1. The EIA process will identify the different methodologies based on recognised good practice and guidelines specific to each technical area and identify the likely significant environmental effects arising from the continued operation of Boulby Mine, unless otherwise specified in Table 4.2. Consultees are encouraged to provide confirmation of agreement to the proposed scope in terms of what is included and excluded, the methodology and the receptors identified.

3.2 TYPES OF EFFECTS

3.2.1. EIA is concerned with the identification of likely significant effects on the environment. However, the terms impact and effect are often used synonymously and this can lead to confusion. For clarity for this proposal, a cause and effect logic will be applied where impacts are the changes that arise (e.g. changes in drainage pattern) and effects are the consequences of those changes (e.g. habitat becomes degraded by changes in drainage).

3.2.2. Impacts and effects are therefore defined as follows:

- Impact: any change attributable to the mining operations that is likely to result in an environmental effect, i.e. they are the cause of the environmental effect; and
- Effect: the result of the change in relation to specific environmental resources or receptors (an effect may in turn produce further change, i.e. an effect may become an impact in its own right).

TYPES OF EFFECT

3.2.3. The EIA Regulations require consideration of all likely significant effects on the environment whether: direct/indirect; secondary; cumulative; positive/negative; short/medium/long-term; or permanent/temporary. Key here however is not the type of effect, but whether effects are likely to be significant, and if so, that they are considered in the assessment. It is therefore also appropriate that effects which are not considered likely to be significant are not considered in the EIA. In terms of how likely significant effects arise, the following will be considered:

- Direct effects are readily identified because of the physical connection between some element of the mining operations and an affected receptor;
- Indirect effects require some additional pathway for the effect to arise, for example, a listed building may not be directly impacted by any elements of the mining operations, but, if the visual effects could change the setting of the listed building there would be an indirect effect;
- Secondary effects would typically require further pathway connections, for example, an effect on a receptor A could have a secondary effect on receptor B, if B was itself dependent on A in some way, as, for example, a food source;
- Cumulative effects arise when the receptors affected by the mining operations are also affected by the aggregation of environmental effects or the interaction of impacts, for example from effects or impacts arising from Boulby Mine alongside other developments; and
- Transboundary effects would occur when the effects would stretch across national boundaries.

3.2.4. Likely significant effects will be considered in terms of their character – either positive (representing environmental gain) or negative. There may also be cases where it is appropriate to identify that a change may occur but to note that the potential change is either neutral - and neither specifically

beneficial nor adverse - or is a matter of personal opinion. The likelihood of the effect occurring will also be considered, being either unlikely, uncertain or likely to occur.

3.2.5. Likely significant effects will also be considered in terms of their duration. Effects can typically be:

- Temporary – these effects are likely to last for a period of a few days to a few months, they will be related to a particular activity and will cease as soon as the activity ceases;
- Short-term – this would normally be considered to be between a period of a few months to a few years depending on the effect being discussed and the environment's ability to recover from an impact;
- Medium-term – this would typically be a period of between a few years and around 10 years;
- Long-term – this would typically be a period of between around 10 years and the life of the mining operations; and
- Permanent – this would typically mean an effect resulting in an irreversible change in the environment.

3.3 TEMPORAL AND SPATIAL SCOPE

TEMPORAL SCOPE

The temporal scope of the EIA will focus on the continuation of site operations over the period of operation to 2048. In addition reference will be made to the site operations taking place during reclamation, restoration and aftercare works. For ease of reporting the temporal scope will generally be considered in relation to the following key stages of the development:

- Operations up to 2048 – effects are likely to be similar in nature to that of the current mining operations, with the inclusion of some environmental improvement works. These effects are likely to be short to medium term (whilst environmental improvements mature), and long term for the mining operations; and
- Restoration and Aftercare – effects may arise from the reclamation and restoration of the site. These effects are likely to be temporary and short term. At aftercare, the effects are likely to be permanent.

SPATIAL SCOPE

3.3.1. In its broadest sense, the spatial scope of an EIA is the area over which significant effects to the environment may occur as a consequence of the mining operations during the operational period.

3.3.2. The spatial scope varies between the environmental topics assessed. For example, the effect of the mining operations on the landscape resource and visual effects is assessed within a much larger zone from the site boundary when compared to terrestrial ecology related effects.

3.4 DEFINING SIGNIFICANCE

3.4.1. The EIA Regulations recognise that developments will affect different environmental elements to differing degrees and that not all of these are of sufficient concern to warrant detailed investigation or assessment through the EIA process. The EIA Regulations identify those environmental resources that warrant investigation as those that are "*likely to be significantly affected by the development*".

3.4.2. The EIA Regulations themselves do not define significance and it is therefore necessary to state how this will be defined for the EIA. For some subjects, significance is arrived by comparing the results of assessment calculations with standard limits or criteria in national legislation or guidance.

For others, the conclusion about significance is arrived at using professional judgement, with reference to the development description, available information about potential changes that are expected to be caused by the mining operations and the receptors that may be affected.

3.4.3. Consideration is given to the interaction of a receptor's sensitivity to change, and the magnitude of potential changes caused by the mining operations to identify a level of effect. In some cases, professional judgement can be guided by quantitative values whilst in other cases qualitative descriptions are used.

3.4.4. **Table 3.1** provides an indication of how the level of effect is generally categorised from the interaction of a receptor's sensitivity to change and the magnitude of change. Of course, in many cases, the divisions between categories of receptor sensitivity and magnitude of change may not be as clearly delineated as shown and professional judgement is always applied. Details of any variation in assessment methodology and definitions of how the terms are derived for each topic (e.g. using relevant guidance) will be set out in the methodology section of each topic chapter.

Table 3-1 – Establishing the Level of Effect

		Importance or Sensitivity of Receptor			
		HIGH	MEDIUM	LOW	NEGLIGIBLE
Magnitude of Change	LARGE	Substantial	Substantial - moderate	Moderate / slight	Negligible / no effect
	MEDIUM	Substantial - moderate	Moderate	Slight	Negligible / no effect
	SMALL	Moderate / slight	Slight	Slight / negligible	Negligible / no effect
	NEGLIGIBLE	Negligible / no effect	Negligible / no effect	Negligible / no effect	Negligible /no effect

Key		
		Significant in terms of the EIA Regulations.
		Potentially significant in terms of the EIA Regulations. To be clarified by detailed assessment work.
		Not significant in terms of the EIA Regulations

3.4.5. Having identified the level of effect, those environmental effects considered to be significant in terms of the EIA Regulations are then determined using professional judgement in combination with any published guidance on significance evaluation. For some of the topics that will be assessed in the ES there is published guidance about significance evaluation. Where such topic-specific guidance exists it will be used to inform the development of the significance evaluation methodologies used in the ES. For other topics, a level of effect of substantial/moderate or greater is generally of most importance to the decision-maker and so these effects are considered significant.

3.5 STRUCTURE OF THE ENVIRONMENTAL STATEMENT

3.5.1. The ES is likely to be split into three volumes; the main text of the ES (Volume 1) plus the accompanying figures (Volume 2) and appendices (Volume 3). A separately bound, stand-alone Non-Technical Summary (NTS) will also be prepared. The ES will accompany the other documents comprising the planning application.

3.5.2. Volume 1 is likely to comprise multiple chapters including:

- Chapter 1: Introduction - An introduction to the Proposed Development and the Applicant, including its location.
- Chapter 2: The Environmental Impact Assessment (EIA) Process, Scoping and Consultation - An overview of the EIA process, its regulatory context, an outline of the assessment methodology, and details of the EIA project team. It will also include a summary of the scoping and consultation process that assisted in the identification of likely significant environmental effects to be given further consideration in each technical chapter.
- Chapter 3: Description of the Mining Operations – A description of the mining operations over the proposed life of the mine, together with a summary of the works likely to be needed to reclaim and restore the site, and the aftercare commitments. This section will identify the expected residues, emissions and wastes generated by the development. It will also include a description of the alternatives that have been considered and why the proposed development has been chosen.
- Chapter 4: Planning Policy Overview - An overview of the planning and regulatory context related to the mining operations, which may influence the EIA.

3.5.3. The EIA process will give consideration to all environmental topics but will be focused on those relating to likely significant environmental effects. Separate technical chapters will therefore be provided for those environmental subjects which are scoped into the EIA.

3.5.4. In general, for each subject area chapter, the following format will be adopted with regard to the structure and presentation of information:

- Summary – a short summary of each technical chapter is included at the outset, this text also forms the basis of that included in the Non-Technical Summary that accompanies the ES;
- Introduction and overview – setting the scene for the topic, the nature of the receptors to be considered, and how the progression of the mining operations might cause changes to the baseline;
- Methodology and approach – describing the planning context for the specific aspect of the environment, how receptors were identified through a scoping and consultation process, along with the specific methods used for data gathering, predicting levels of effects and evaluating significance of effects;
- Baseline information – describing the current state and circumstances of the identified receptors and changes that might be expected to arise in the continued mining operations, and gaps in the information;
- Scope of assessment – details the potential receptors that could be affected by the ongoing mining operations, and the likely significant effects that have been subject to further assessment;
- Predicted effects – an identification of the effects predicted to arise as a result of the continued mining operations in the absence of applied mitigation;

- Mitigation and enhancement measures – identification of measures which may be necessary to control or manage identified potentially significant effects or provide enhancements;
- Residual effects – an assessment of any effects remaining after the mitigation measures have been employed. If any effects remain significant, even with the mitigation, recommendations for any further mitigation above the initial measures, will be considered; and
- References.

3.5.5. Careful attention will be paid to avoid the potential for overlap between technical topic chapters. So, for example, any effects on ecological resources arising from hydrological change would be considered in the Ecology chapter with only the change in hydrological characteristics considered in the Hydrology chapter.

3.5.6. A separate non-technical summary will be provided.

3.6 SUBJECT SPECIFIC METHODOLOGIES

3.6.1. For certain subjects, further details on their specific methodology for assessment are provided below.

ECOLOGY

3.6.2. An Ecological Impact Assessment (EcIA) would be undertaken to determine potential effects of the proposed development on ecology. The EcIA approach is based on current Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Impact Assessment in the United Kingdom[1]. These guidelines recognise that an appropriate ecological assessment cannot consider in detail every individual species or habitat that may potentially be affected by a development. The scope of the EcIA is therefore based on outcomes of baseline surveys; the scoping exercise; other consultations and data; and the incorporated mitigation. These are used to identify those biodiversity features that could be 'significantly' affected by the proposed development (i.e. where the effects on the feature are of sufficient concern that they could influence the decision about whether or not planning permission should be granted), or for which the development could result in the contravention of relevant legislation. EcIA should therefore focus on 'important ecological features' (IEF) (which may include legally protected species) that may be vulnerable (i.e. both exposed and sensitive) to the likely effects of the proposed development. Features that are of sufficient importance that an effect upon them would have the potential to be significant, together with all relevant legally protected species, are assessed. This is typically a two-stage process, involving a 'screening' of features that cannot be significantly affected, followed by more detailed assessment of impacts on remaining features. Significant effects would be addressed using the mitigation hierarchy of avoidance, mitigation, then (as a last resort) compensation.

3.6.3. All survey work will be carried out following best practice guidance where relevant, and unless otherwise stated, including:

[1] CIEEM (2018) *Guidelines for Ecological Impact Assessment in the UK and Ireland: Terrestrial, Freshwater, Coastal and Marine version 1.3.* Chartered Institute of Ecology and Environmental Management, Winchester.

- UK Habitat Classification (UKHab)/NVC: UK Habitat Classification Working Group, 2023[2] and Rodwell, 1990-2000[3];
- Ancient/Veteran trees: "Defining and Surveying Veteran and Ancient Trees" (Fay, 2007)[4];
- Hedgerows: Hedgerow Regulations 1997[5];
- Great Crested newts: Habitat Suitability Index (HSI) assessment - Oldham et al. 2000[6]. eDNA survey - Biggs et al 2014[7];
- Bats: Current BCT guidelines[8];
- Badger: The Inverness Badger Survey[9] and Scottish Natural Heritage Best Practice Badger Survey Guidance Note methodology[10];
- Otter: Findlay and White (2026)[11];
- Reptiles: Froglife's "Advice Sheet 10: Reptile Survey[12] and the Herpetofauna Workers' Manual[13];
- Notable species: Buglife (2009) Planning for Brownfield Biodiversity: A best practice guide[14], and UK Biodiversity Action Plan (BAP) Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation[15].

[2] UK Habitat Classification Working Group (2023). UK Habitat Classification – Habitat Definitions V2.0

[3] Rodwell, J.S. (Ed.) (1990). British Plant Communities 1, Woodlands and scrub; Rodwell, J.S. (Ed.) (1991); British Plant Communities 2, Mires and Heaths; Rodwell, J.S. (Ed.) (1992); British Plant Communities.3, Grasslands and Montane Communities; Rodwell, J.S. (Ed.) (2000); British Plant Communities 5, Maritime Communities and Vegetation of Open Habitats. Cambridge University Press, Cambridge.

[4] Fay, N. (2007). Defining Age and Surveying Veteran & Ancient Trees: A discussion paper on criteria for surveying veteran and ancient trees.

[5] Department for Food, Environment and Rural Affairs (DEFRA) (1997). The Hedgerow Regulations.

[6] Oldham R.S., Keeble J., Swan M.J.S., and Jeffcote M. (2000). Evaluating the Suitability of Habitat for the great crested newt Triturus cristatus. Herpetological Journal Volume 10 pp.143-155.

[7] Biggs, J, et al. Using eDNA to develop a national citizen science-based monitoring programme for the great crested newt (Triturus cristatus)."Biological Conservation 183 (2015): 19-28.

[8] Collins, J. (Ed.). (2023). Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition). The Bat Conservation Trust, London.

[9] Inverness Badger Survey (2003) Scottish Natural Heritage Commissioned Report No. 096

[10] http://www.snh.gov.uk/docs/B957619.pdf "Best Practice Badger Survey Guidance Note

[11] Findlay, M. and White, P. (2026). The Otter Field Survey and Monitoring Handbook: A Practical Guide to Field and Camera-Trap Surveys.

[12] Froglife (1999). Reptile survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

[13] Gent, T. & Gibson, S. (2003) Herpetofauna Workers' Manual. JNCC, Peterborough.

[14] Buglife (2009). Planning for Brownfield Biodiversity: A best practice guide. Buglife - The Invertebrate Conservation Trust, Peterborough

[15] Cresswell, W.J., Birks, J.D.S., Dean, M., Pacheco, M., Trewhella, D., Wells, D. & Wray, S. (eds.) (2012). UK BAP Mammals: Interim Guidance for Survey Methodologies, Impact Assessment and Mitigation. Mammal Society, Southampton.

3.6.4. The purpose of this section is to establish the existing transport baseline, identify the nature and scale of any changes arising from the proposed development and to determine whether Traffic and Transport should be scoped into the Environmental Impact Assessment (EIA).

Existing Site and Transport Baseline

Site Location and Highway Network

3.6.5. Boulby Mine is located in a rural area of the North York Moors National Park, with vehicular access via the A174. The A174 provides north–south connectivity to the wider strategic road network serving Teesside and surrounding areas.

3.6.6. The A174 functions as the principal route for HGV movements associated with the mine and has been identified and accepted historically as suitable for mine-related traffic. Minor roads in the vicinity of the site are avoided by HGVs, except where access is required for specific, local delivery purposes.

Existing Legal Agreement Controls

3.6.7. The existing planning permission for the mine is accompanied by a legal agreement that strictly controls road-based movements, including:

- A maximum of 150,000 tonnes of product exported by road in any rolling 12-month period;
- A maximum of 66 outward HGV movements per day; and
- Defined HGV routing arrangements to protect the local highway network and nearby communities.

3.6.8. These controls apply to all relevant road-based activities at the site, including the importation of MoP and form part of the established transport baseline.

Rail Infrastructure and Operations

3.6.9. Processed materials are primarily despatched from the site by rail. Carriages are loaded at the rail facility to the west of the mine and travel via a private rail line, owned by ICL Boulby, to Skinningrove where it connects to the National Rail network.

3.6.10. From Skinningrove to Saltburn, the line is shared with British Steel freight operations and beyond Saltburn with passenger rail services into Teesside. This arrangement has been long-established and is accepted as part of the baseline transport environment.

3.6.11. There are no rail off-loading facilities at the mine site and no rail loading facilities at Tees Dock capable of accommodating MoP imports. Consequently, MoP importation takes place exclusively by road, an approach which has been utilised since MoP production ceased at Boulby Mine in 2018.

Workforce and Servicing Trips

3.6.12. Due to the rural location of the site and the shift-based nature of mining operations, the majority of employees travel to the site by private car. On-site parking provision exists to accommodate this demand.

3.6.13. General servicing and supply deliveries are predominantly undertaken by road. Oil supplies used by the boilers forming part of the processing activities are delivered by rail.

Description of the Proposed Development (Traffic and Transport)

3.6.14. The proposed development seeks a new planning permission that would:

- Allow continued importation of MoP by HGV from 2027 through to 2048;
- Retain certain buildings and structures associated with MoP/polyhalite blending during this period;
- Maintain current levels of mine output and operational activity;
- Retain all existing legal agreement restrictions relating to road-based movements;
- Maintain existing HGV routing arrangements via the A174; and
- Require no changes to site access arrangements, junction layouts, visibility splays or highway infrastructure.

3.6.15. There is no proposal to increase the number of HGV movements, vehicle size or operational hours beyond those currently consented.

Assessment of Potential Traffic and Transport Effects

Construction and Decommissioning

3.6.16. The proposed development does not introduce a new construction phase. Decommissioning and restoration activities would be consistent with those already permitted, albeit with certain activities deferred to reflect the revised operational programme.

3.6.17. Traffic associated with decommissioning would be temporary, limited in scale and comparable with previously assessed scenarios. No material effects on highway capacity, safety or operation are anticipated.

Operational Traffic

3.6.18. Operational traffic associated with the proposed development would:

- Remain within the existing 150,000-tonne annual cap and 66 HGV per day limit;
- Utilise established access points and agreed routing; and
- Reflect a continuation of existing traffic patterns rather than an intensification.

3.6.19. The continuation of MoP importation does not result in any additional HGV movements over and above the consented baseline. As such, there would be no material change to traffic flows on the A174 or the wider highway network.

Cumulative Effects

3.6.20. The proposal does not give rise to cumulative traffic effects when considered alongside other consented developments in the area. The MoP imports already form part of the operational baseline assessed through previous planning permissions, including the most recent consent granted in 2023.

Road Safety and Amenity

3.6.21. Given that traffic levels, routing and operational controls remain unchanged, no adverse effects on road safety, pedestrian amenity or driver delay are anticipated. The proposal would not introduce any new conflict points or exacerbate existing conditions on the highway network.

EIA Scoping Recommendation

3.6.22. It is proposed that Traffic and Transport is scoped out of the EIA, for the following reasons:

- The proposal would not result in any material change to traffic volumes, patterns or routing;

- All road-based movements would continue to operate within existing legal agreement controls;
- There are no changes to site access or highway infrastructure;
- The development does not give rise to significant or severe transport-related effects within the meaning of the EIA Regulations or the NPPF;
- Traffic and transport effects have been previously assessed and accepted through earlier planning permissions, including the 2023 consent;
- The proposal represents a short-term continuation of an existing baseline rather than a new or intensified impact.

3.6.23. However, to provide clarity and reassurance to the Local Planning Authority and Highway Authority, the applicant is willing to submit:

- A Transport Statement; or
- Concise Technical Transport Note; or
- An updated Staff Travel Plan

in support of the planning application, confirming compliance with existing restrictions and demonstrating that no material transport impacts would arise.

NOISE

3.6.24. In addition to the EIA Regulations, Government noise policy, namely that set out within the Noise Policy Statement for England 2010 (NPSE), requires that noise and vibration assessments identify effects that would result in significant adverse impacts on health and quality of life from a proposed development. NPSE generally sets out the vision and aims for dealing with noise (except for workplace/occupational noise). NPSE requires that noise and vibration assessments identify impacts that would result in significant adverse impacts on health and quality of life from a proposed development. The aims of NPSE include: avoiding significant adverse impact on health and quality of life; mitigating adverse impacts on health and quality of life; and to contribute to the improvement of health and quality of life. In addition, the National Planning Practice Guidance, 2014 (NPPG) relates in terms of a noise hierarchy the levels of perception to noise exposure with expected outcomes and required actions.

3.6.25. In NPSE (2010) and NPPG (2014) the effect levels in relation to adverse impacts on health and quality of life are set out as:

- NOEL – No Observed Effect Level – level below which no effect on health and quality of life is detected;
- LOAEL – Lowest Observed Adverse Effect Level – level above which adverse effects on health and quality of life can be detected;
- SOAEL – Significant Observed Adverse Effect Level – level above which significant adverse effects on health and quality of life occur; and
- UAEL – Unacceptable Adverse Effect Level – level above which adverse effects are unacceptable.

3.6.26. The NPPG (2014) links the increasing effect levels to an effect, perception by receptor and associated action, as summarised below.

Table 3-2 – NPPG – Summary of noise exposure

Increasing effect level	Effect	Perception	Action
Less than NOEL (No Observed Effect)	No effect	Not noticeable	No specific measures
Greater than NOEL (No Observed Effect)	Effect	Noticeable and not intrusive	No specific measures
Greater than LOAEL (Lowest Observed Adverse Effect Level)	Adverse effect	Noticeable and intrusive	Mitigate and reduce to a minimum
Greater than SOAEL (Significant Observed Adverse Effect Level)	Significant adverse effect	Noticeable and disruptive	Avoid
Greater than UAEL (Unacceptable Adverse Effect Level)	Unacceptable adverse effect	Noticeable and very disruptive	Prevent

3.6.27. In relation to the effect levels summarised above, NPSE (2010) sets out three aims:

- avoid developments or activities which are demonstrated to have significant observed adverse effects i.e. greater than the SOAEL;
- mitigate and minimise developments or activities where the effect lies between the LOAEL and the SOAEL; and
- to contribute to the improvement of health and quality of life through the effective management and control of environmental noise.

3.6.28. The NPSE (2010) states that it is not possible to have a 'single objective' noise (or vibration) based measure applicable to all sources and receptors that define the on-set of the LOAEL or the SOAEL. It is however possible to define threshold levels for the onset of each of the effect levels, based upon available Standards and technical guidance. The Standards and technical guidance used within the noise assessment to define the NPSE (2010) threshold levels, and associated reasoning, will be detailed within the ES.

GREENHOUSE GASES

3.6.29. The Greenhouse Gases (GHG) assessment will consider the potentially significant effects from operation of the proposals on GHG emissions entering the global atmosphere. The assessment of GHG emissions is not restricted by geographical area, instead focussing on any increase or decrease in emissions as a result of the proposals, wherever that may be. The sensitive receptor is the global atmosphere (climate). As there is only one receptor 'the climate', it has a consistent sensitivity (high) no matter the location of the emissions source.

3.6.30. The assessment will consider the likely magnitude of GHG emissions (additional or avoided GHG emissions) in comparison to the Future Baseline, without the proposals. Any magnitude of emitted or avoided GHG emissions makes a cumulative contribution to climate change (positive or negative) and therefore there are currently no clear thresholds for what level of GHG emissions can be considered significant in an EIA context. In the absence of agreed thresholds, ISEP

Guidance[16] and professional judgement, including previous experience of similar projects, will be used to evaluate the magnitude of change in the ES.

3.6.31. The methodology adopted for GHG assessment attributes a significance of effect level based on the sensitivity/value of the affected receptor(s) (high) and the magnitude of change arising from a Project. Significance of GHG impacts is assessed in line with ISEP Guidance: "*a development's emissions should be based on its net impact over its lifetime, which may be adverse, beneficial or negligible*".

3.6.32. ISEP Guidance provides five distinct levels of significance, which are not solely based on whether a project emits GHG emissions alone, but how the project makes a relative contribution towards achieving a science-based 1.5°C aligned transition towards net zero. Specifically, when considering the aspect of significance, the ISEP Guidance states: *"The crux of significance therefore is not whether a project emits GHG emissions, nor even the magnitude of GHG emissions alone, but whether it contributes to reducing GHG emissions relative to a comparable baseline consistent with a trajectory towards net zero by 2050".* The levels of significance to be used for the GHG assessment in the ES, as defined in the ISEP Guidance are outlined below. Major or Moderate Adverse effects and Beneficial effects are considered Significant; Minor Adverse and Negligible effects are considered to be Not Significant.

- **Major Adverse (Significant)**: the Proposed Development's GHG impacts are not mitigated or are only compliant with do-minimum standards set through regulation, and do not provide further reductions required by existing local and national policy for projects of this type. A project with major adverse effects is locking in emissions and does not make a meaningful contribution to the UK's trajectory towards net zero.
- **Moderate Adverse (Significant)**: the Proposed Development's GHG impacts are partially mitigated and may partially meet the applicable existing and emerging policy requirements but would not fully contribute to decarbonisation in line with local and national policy goals for projects of this type. A project with moderate adverse effects falls short of fully contributing to the UK's trajectory towards net zero.
- **Minor Adverse (Not Significant)**: the Proposed Development's GHG impacts would be fully consistent with applicable existing and emerging policy requirements and good practice design standards for projects of this type. A project with minor adverse effects is fully in line with measures necessary to achieve the UK's trajectory towards net zero.
- **Negligible (Not Significant)**: the Proposed Development's GHG impacts would be reduced through measures that go well beyond existing and emerging policy and design standards for projects of this type, such that radical decarbonisation or net zero is achieved well before 2050. A project with negligible effects provides GHG performance that is well 'ahead of the curve' for the trajectory towards net zero and has minimal residual emissions.
- **Beneficial (Significant)**: the Proposed Development's net GHG impacts are below zero and it causes a reduction in atmospheric GHG concentration, whether directly or indirectly, compared

[16] ISEP (2022) Assessing Greenhouse Gas Emissions and Evaluating Their Significance 2nd Edition. Available at: https://www.isepglobal.org/

to the without project baseline. A project with beneficial effects substantially exceeds net zero requirements with a positive climate impact.

3.6.33. In order to provide context to the GHG emissions, and as set out in the ISEP Guidance, the estimated GHG emissions arising from the proposals will be compared with the respective UK carbon budgets set by the UK Government covering 2023 to 2037.

4 SCOPE OF THE ASSESSMENT

4.1 PREDICTED CHANGES AFFECTING BASELINE CONDITIONS

4.1.1. The situation with Boulby Mine means that the EIA will be different from most EIAs, in that the application is for the continuation of an existing development, rather than involving the construction and subsequent operation of a new build development. For a new build development, the usual approach would be for a range of research to be undertaken to gain an understanding of the baseline conditions on the undeveloped site, and then to examine how the construction, operational (and if relevant, decommissioning) activities would affect the baseline. In this way conclusions can be drawn in how the proposed development will affect the existing environment.

4.1.2. In the case of Boulby Mine, the situation will not change from the current baseline conditions, which already include the operational mine. The proposed development will see a continuation of the existing activities and therefore a continuation of any environmental effects that are already occurring as a result of the Mine.

4.1.3. However, in the absence of the proposed development, the future baseline would change. The existing planning permission requires that the importation of MoP would cease, and the blending of polyhalite with MoP would therefore also cease, by the end of 2027. This would make a number of buildings and structures on the site redundant, and they would be removed or reduced in height, by the end of 2027. The proposed development would see the importation of MoP continue, the blending of polyhalite with MoP continue, and the buildings and structures remaining on site as they currently exist, so the proposed development will have an impact against the future baseline.

4.1.4. As part of this consideration, It is important to note that the importation of MoP takes place within the daily and annual limits on place for HGV use at the Mine Site that are relevant for the export of product. These numbers will not change as a result of the proposed development and therefore no changes to the environment will result. The only change to the future baseline is therefore from the continuation of blending activities and the associated retention of the buildings and structures in their current state.

4.1.5. Table 4.1 sets out what is proposed to be scoped into the Environmental Statement. It also identifies topic areas or parameters of what is proposed to be scoped out of the Environmental Statement. Comments from the National Park Authority on the proposed methodology scope (as well as the comments on the topic/parameter scope of works), would be welcomed.

SCOPE OF ASSESSMENT

Table 4-1 – Scope of Assessment

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
Landscape & Visual	The scope of the LVIA needs to be established taking account of the fact that: ▪ the extraction operations take place underground and there will therefore be no effects on landscape or visual amenity from the continued extraction operations; and ▪ there are no changes proposed to the existing above ground plant and buildings and other ancillary areas. For the operational phase of development the LVIA will assess the landscape, visual and cumulative effects of retaining the plant and buildings until 2048. This will include the fixed plant and buildings and also the ephemeral features such as the steam plume from the dryer stack and vehicle movements. Potential effects from site lighting will be taken into account. The LVIA will assess the decommissioning and restoration stage. The LVIA will be undertaken in accordance with current good practice and will be informed by a range of guidance published by organisations such as the Landscape Institute, IEMA and SNH. The LVIA will be based on a study area of 5km radius from the site boundary and 10 viewpoints have been identified within this area for assessment (Figure 4.1) and are listed in Table 6.3. Two of these viewpoints are included from outside the 5km study area to help understand the wider nature of visibility within the National Park. The effects of retaining the existing mine structure for an extended period on national and local landscape character will be determined, reference will be made to landscape character areas	Effects the landscape beyond 5km of the site boundary Effects on visual receptors beyond 5km of the site boundary Cumulative effects beyond 5km radius of the site.

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	as identified within the following documents; the North York Moors Landscape Character Assessment (2021) and the North Yorkshire and York Landscape Character Assessment (2011). The effects on the following designated landscapes will be specifically considered: ■ The North Yorkshire and Cleveland Heritage Coast; ■ North York Moors National Park The following groups of receptors will be identified to assess the effects of retaining the mine for an extended period on their visual amenity: ■ Settlements within 5km of the site boundary; ■ Small groups of residential properties and individual residential properties within 2km; ■ A class roads within 5km, ■ B class and minor roads within 2km; ■ National trails and cycle paths within 5km; ■ Public Rights of Way (PRoW) and other designated paths within 2km; ■ Tourist and visitor destinations within 5km; The assessment will also consider potential cumulative landscape and visual effects with existing or proposed major developments within the 5km radius study area. The key landscape and visual issues to be considered are likely to be: ■ The nature of the buildings and plant at the site and the impact of retaining these until 2048 would have on the landscape character and visual amenity of the area and the special qualities of the National Park; ■ how the buildings and plant appear from key viewpoints; ■ any cumulative effects; ■ any mitigation and/or enhancement measures that could be taken to limit any visual or landscape impacts.	

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	The Study Area and proposed receptors are the same as included within the EIA for planning application NYM/2019/0764/MEIA, and it is not considered that there has been any changes to guidance since then that would lead to changes being required.	
Historic Environment	It is considered that the historic environment can be scoped out of the EIA as the site is an existing mine and no changes proposed would cause further impact on known designated and non-designated heritage assets or potential buried heritage assets within the surface site footprint. A Heritage Statement will be provided with the planning application to detail the non-EIA level impacts on known designated heritage assets which could be impacted though changes in their setting. This was the approach taken under application NYM/2019/0764/MEIA and was used during the determination process for that application without question.	Direct physical effects on known and potential heritage assets: • No new buildings or development are proposed which would disturb below ground archaeological remains and no other heritage assets are recorded within the surface site boundary. Effects on heritage assets outside of the working area: • It is considered that the proposed changes have the potential to cause minor or negligible impact to designated heritage assets outside the site boundary through changes in their setting. It is considered that significant effects on these designated assets would not occur as a result of intervening vegetation, distance from assets to the surface site and location and the sensitivity of those assets.
Ecology and Ornithology	The mine is currently operational and there are no changes proposed from its existing status, other than to extend the operational life of the site until 2048. However, the future baseline will change from 2027 when mine features which would have been replaced under the current planning permission during that period by (largely) agricultural land would now remain until the end of the operation period. Baseline ecological information for the current operational site would be updated, to identify any changes to the existing baseline	The following elements are scoped out in line with the EcIA for planning application NYM/2019/0764/MEIA. The Boulby Quarries Site of Special Scientific Interest (SSSI) and Staithes-Port Mulgrave SSSI are designated for geological reasons and are therefore not considered in the EcIA. The North York Moors Special Area of Conservation (SAC) is located approximately 2.88km from the site and is designated due to the wet and dry heath and blanket bog habitats found there. Given the separation distance and the nature of the designation, and the

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	which may have occurred since the EcIA was undertaken for the existing planning permission. The EcIA to assess of operational and decommissioning effects will take into account the future baseline, which would have occurred following the decommissioning and restoration of parts of the site that were due to be completed by end of 2027 under the existing planning permission. Existing effects on IEFs present within the site will be considered in the EcIA, along with any additional effects resulting from potential changes to the existing baseline, which may have occurred since the existing planning permission was granted. An extended UKHab survey will be undertaken to update the existing habitat baseline for the site, and habitat suitability assessments for protected and priority species. Depending on the results of this survey, further detailed surveys and assessments may be required to provide up to date baseline information. undertaken to confirm whether any significant effects are likely to be occurring on any IEFs from the existing operational mine. This work will also be used to identify whether any mitigation measures are required. Whether or not significant effects are identified, the work will also be able to feed into The updated habitat baseline an enhancement plan to provide appropriate Biodiversity Net Gain (BNG) for the site. Existing effects on IEFs present within the mining site will be assessed. Informed by the existing baseline information and assessment of the site from 2019 from the EcIA for planning application NYM/2019/0764/MEIA, it is considered that the following	fact that HGV numbers and associate emissions will not change from existing levels, it is not considered that there would be any significant effects on the integrity of the SAC. Considering the nature of the proposals, it is considered unlikely that the proposed development would affect the integrity of other designated sites given they are located at least 2.5km from the site. Informed by baseline information gathered for the EcIA for planning application NYM/2019/0764/MEIA, it is considered that the following species can be scoped out of the assessment on the basis that they are unlikely to be present within the zone of influence of the proposed development: ▪ Water vole are unlikely to occur within the site due to the absence of local records (the EcIA desk study for planning application NYM/2019/0764/MEIA undertaken in 2019 did not return any records within 5km), and the Wildlife Trusts national database and mapping project reveals the nearest recorded population of water vole to be within the vicinity of Guisborough[17] which is approximately 13.5km west of the site. The 10km grid square that Boulby Mine is located within does not contain any water vole records. The site does not support suitable habitat within water vole dispersal distance (approximately 2km) from known populations, The majority of watercourses on the site are not suitable to support water vole as they have dense tree cover along their banks. An area of suitable watercourse habitat approximately 0.2km in length (along Boulby Gill) is not appropriate to support a viable

[17] https://www.wildlifetrusts.org/national-water-vole-database-project

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	species/species groups and habitats may be considered for assessment purposes: ■ Ancient replanted woodland ■ Habitats of Principal Importance including (but not limited to) ponds; ■ Badger; ■ Bats; ■ Breeding birds; ■ Great crested newts; ■ Otter ■ Freshwater fish; ■ Reptiles; ■ Priority species including (but not limited to) brown hare, hedgehog, common toad, harvest mouse, and invertebrates; ■ Invasive non-native species (giant hogweed, montbretia, grey squirrel and rhododendron are known to occur on site). Consideration will be given to effects on the ecological integrity of the non-statutory designated Oneham's Pasture Local Wildlife Sites (LWS) and Easington Beck Complex LWS which are located/partly located within the area of the site and the Saltburn to Staithes Coast LWS located approximately 1.78km northwest. A Biodiversity Net Gain assessment would be undertaken for the proposed development using the Statutory Metric.	population of water vole, as a self-sustaining population requires at least 2km of suitable habitat. ■ White-clawed crayfish are unlikely to occur within the site or in the immediate area based on an absence of local records and the species' known UK distribution[18]. No records of white-clawed crayfish were identified by the EcIA desk study for planning application NYM/2019/0764/MEIA undertaken in 2019. The scoping opinion for planning application NYM/2019/0764/MEIA stated that it is considered highly unlikely this species will be present on the site.

[18] https://cdn.buglife.org.uk/2019/08/White-clawed-crayfish_0.pdf

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
Hydrology and Hydrogeology	The surface mine area lies within Flood Zone 1 but is greater than 1 hectare so a flood risk assessment will be required. This is the same approach as was agreed for the EIA for planning application NYM/2019/0764/MEIA.	Impacts on groundwater from the surface activities and the mining operations. As described above, there are no impacts on groundwater quality from the existing mine operations due to the nature of groundwaters affected and the low permeability of geology meaning there is no hydraulic continuity between groundwaters and either surface or underground working areas. Impacts on private water supplies: Due to the lack of dewatering and negligible connectivity with receptors. Impacts on surface water. As described above, surface water from the operational area and the wider site, are channelled into the interceptor from where the water is mixed with the inflowing sea brine stream, this is then used as the transport medium for the mine tailings. Surface water run-off, other than at times of the heaviest rainfall, is therefore prevented from entering any watercourses or discharging to land. During heavy rainfall, the dilution effect from the higher water flows has been proven to minimise any pollution concentrations to below baseline levels or other levels of concern. The discharge to sea is considered under the marine environment section.
Traffic and Transport	The mining operations generate both road and rail transport. Approximately 91% of all products are transported by rail. The movement of products by road is currently regulated by an agreement between the North York Moors National Park Authority and ICL Boulby.	Traffic and Transport environmental assessment: No material impact is anticipated and therefore we would propose to scope out Traffic and Transport from the EIA. Vibration from HGV movements:

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	This agreement would not be subject to any proposed amendments: there would be no increase in the number of HGVs entering or leaving the site and no change proposed to the access arrangements. The only changes in road traffic movements would be from any fluctuations in staff traffic. As such we are seeking to scope out Traffic and Transport from the assessment. However, to provide clarity and reassurance to the Local Planning Authority and Highway Authority, the applicant is willing to submit: ■ A Transport Statement; or ■ Concise Technical Transport Note; or ■ An updated Staff Travel Plan	This is highly unlikely to cause structural damage, although some slight disturbance could occur to some of the receptors on the road network, this is unlikely to be significant in EIA terms. Noise from HGV movements will be covered in the noise chapter. PM10 particle emissions from road traffic will be assessed in the Air Quality chapter
Dust and Air Quality	The storage and processing of the mineral above ground does have the potential to give rise to effects from fugitive dust, which arises from the wind blow of particles from the stockpiles of and handling of product. This dust is therefore predominantly salt and polyhalite and could theoretically damage local vegetation and or cause nuisance at local properties. Information will be taken from existing dust monitoring which is undertaken at locations around the Boulby site, plus the use of historic data form the site and available information from desk based sources. It is considered that the available information will cover all likely residential and vegetation receptors. The assessment will consider the potential effects of fugitive dust and will be taken in accordance with the methodology outlined in the	Dust effects arising directly from the underground minerals extraction operations as they are contained and managed by the shaft exhaust systems. Processing of the minerals gives rise to a number of sources of gaseous and particulate emissions, including: ■ the emission of combustion gases and particulate material from three product driers, which are vented to atmosphere via the 87.5 m high dryer stack; ■ Other minor sources of emissions from the site are the boilers for the mine services and administration buildings and workshop activities. ■ Emissions to the atmosphere from the various surface processes are subject to an environmental permit issued by Redcar and Cleveland Borough Council, which sets a number of limits and controls on emissions and requires a comprehensive monitoring regime to be in place. No

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	Air Quality section of Planning Practice Guidance[19]. Activities on site which give rise to dust emissions will be identified and mitigation will be reviewed to establish if further improvements can be made. The transport of the product also gives rise to emissions, normally particulates associated with the diesel fuel (PM10) and this will also be assessed.	significant changes are proposed to the processing plant at the site and so future emissions will be similar to existing levels and will be subject to the same permit controls.
Noise and Vibration	Sound levels from within the red line boundary are unlikely to change significantly as a result of the proposed development as there will be no changes to the existing plant, machinery or operational aspects of the mine workings. A number of historic noise surveys have been undertaken at the Mine, with the most recent taking place in 2025. Information will be taken from these surveys which show that daytime noise levels were largely influenced by road traffic along Whitby Road. At night-time the sound generated by ICL Boulby operations was audible; notably from the main stack to the rear of the Treatment Plant and from front loaders operating around the finished product silo. The historic work also includes noise survey information from mine shutdown periods, which provide the closest comparison of a baseline without the mine in situ. The nearest noise sensitive properties are considered to be Red House Farm 300m to the north east, Boulby Grange 225m to the north west, Ings Farm 600m to the west, and West Ridge Lane Farm 480m to the south east (see Figure 4.2).	Noise from the sea water intake and slurry discharge system.

[19] Planning practice guidance - GOV.UK

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	Operational noise will be assessed using BS4142 2014, or any existing noise limits that may be included within any noise management plan for the site. If required, mitigation will be identified, guided by the noise levels required by national policy and guidance. An assessment of potential effects of noise from the transport of product by road beyond the site boundary will be undertaken.	
Socio Economic Impacts	Not included	A comprehensive socio-economic assessment will be provided with the Planning Statement.
Tourism and Recreation	Surveys and desk based assessment to determine: ▪ Direct and indirect effects on recreation and recreational activities; ▪ Direct and indirect effects on public access; ▪ Effects on tourism and perception of visitors. Receptors will include: ▪ Cleveland Way / England Coast Path; ▪ National Cycle Route 1; ▪ Local PRoW; ▪ Heritage Coast and its coastal villages (Staithes, Runswick Bay; ▪ A174 (as a gateway road into the wider national park, and as a recreational route in the vicinity of the mine in its own right); ▪ Sea activities (fishing, sailing)	The visual effects on users on public rights of way and outdoor tourist attractions within the area will be considered in the LVIA. Impacts on tourist accommodation sites (caravan and camping sites, B&Bs, hotels etc.) will be considered in the socio-economic assessment (separate report, not part of the ES) as businesses reliant on tourism (rather than as tourist 'attractions' in their own right).
Marine Environment	Scoped out	Prior to 2018, Boulby Mine extracted sylvinite and undertook MoP production, and this process produced mine tailings. These

Environmental Topic	Scope of Assessment	Elements to be Scoped Out
		tailings were mixed with sea water extracted form the North Sea via pipeline to form a slurry, and this slurry was discharged to the sea bed of the North Sea also via pipeline. The discharged slurry settled on the seabed in an area known as the Boulby Sand patch, and the action of the sea in this area gradually dispersed this material. CPL undertook a long-term and comprehensive research and monitoring, undertaken before and during the mine's current operations, (starting in 1973) to examine the impacts of this discharge process. This work showed that the marine environment was able to accommodate the discharged material with no significant adverse impacts on water quality or marine habitats or species. Since cessation of sylvinite extraction and MoP production in 2018, no tailings are now produced and discharged to sea, and no settlement of solids will therefore occur on the sea bed. Since 2018, the material which had previously settled is being eroded away by the movement of the tidal waters, returning the Boulby Sand Patch to a natural condition. In the Proposed Development, effluent will continue to be discharged in order to manage the groundwater and surface water runoff collected from the Mine. Surface water run-off is already treated to ensure no pollutants reach the effluent discharge and the groundwaters from the underground working have no opportunity to pick up pollutants. The groundwaters may contain some dissolved mineral from the mine workings. However, the groundwaters are mixed with around 1,000m3 of seawater per day before being discharged. This both cools the groundwaters and also dilutes the effects of any dissolved mineral in the waters. Further dilution then occurs once the discharge reaches the North Sea. All of these factors mean that there will be no discernible impact on the marine environment. No assessment of the marine environment is therefore progressed in the EIA as no significant effects can occur.

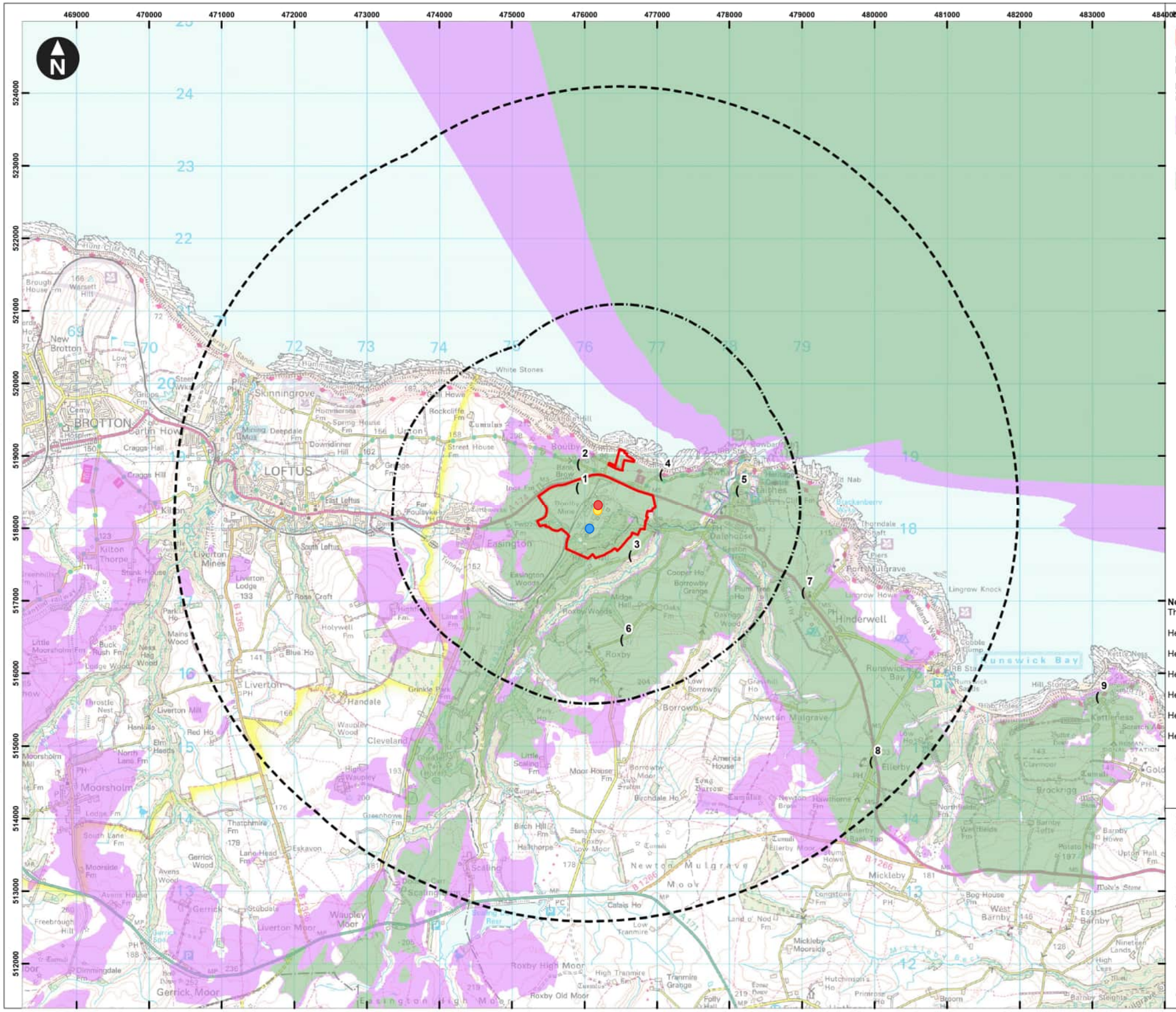
Environmental Topic	Scope of Assessment	Elements to be Scoped Out
		This is the same position that was taken in the EIA for the current planning permission and which was accepted by the North York Moors National park Authority at that time.
Geology and Subsidence	Not included	Historic underground mining activities on the sylvinite seam caused subsidence at the surface and a long term monitoring scheme has been in place to track subsidence levels across the surface above the former onshore underground working area. This has recorded a subsidence bowl which is 750mm deep but as it has formed gradually since the early 1970s, the slow nature of the subsidence had not created any structural damage in the area. The switch from sylvinite to polyhalite now sees no new underground extraction in the onshore area, and polyhalite itself is a more stable substance than sylvinite and less prone to subsidence. Conditions are imposed on the current planning permission which restrict mining operations within 1.5km to ensure that there mining does not have an adverse impact on coastal erosion rates, and ICL Boulby will retain this restriction zone. In addition, the onshore subsidence monitoring would continue into the future. This situation was accepted during the determination of application NYM/2019/0764/MEIA with the Committee Report stating that the underground workings *"would not be likely to give rise to unacceptable impacts from mining subsidence or on the rate of coastal erosion"*.
Greenhouse Gases	Consideration will be given to operational emissions which result from the operation of Boulby Mine and any shifts in energy usage that may occur. In this case, GHG emissions with the potential for significant effects include those for energy and water use in extraction and processing operations, the transport of imported and exported material, and embodied emissions arising from operational materials and management of waste. In-line with building and infrastructure life cycle stages identified in BS EN	In-line with building and infrastructure life cycle stages identified in BS EN 17472:2022 and PAS 2080 for carbon management in buildings and infrastructure, the following sources of GHG emissions have been scoped out from further assessment as the potential effects are not considered likely to be significant: ▪ A1-5 Construction Phase: emissions have been scoped out as the physical infrastructure and operational setup for the proposals are already in place and no preparatory works are

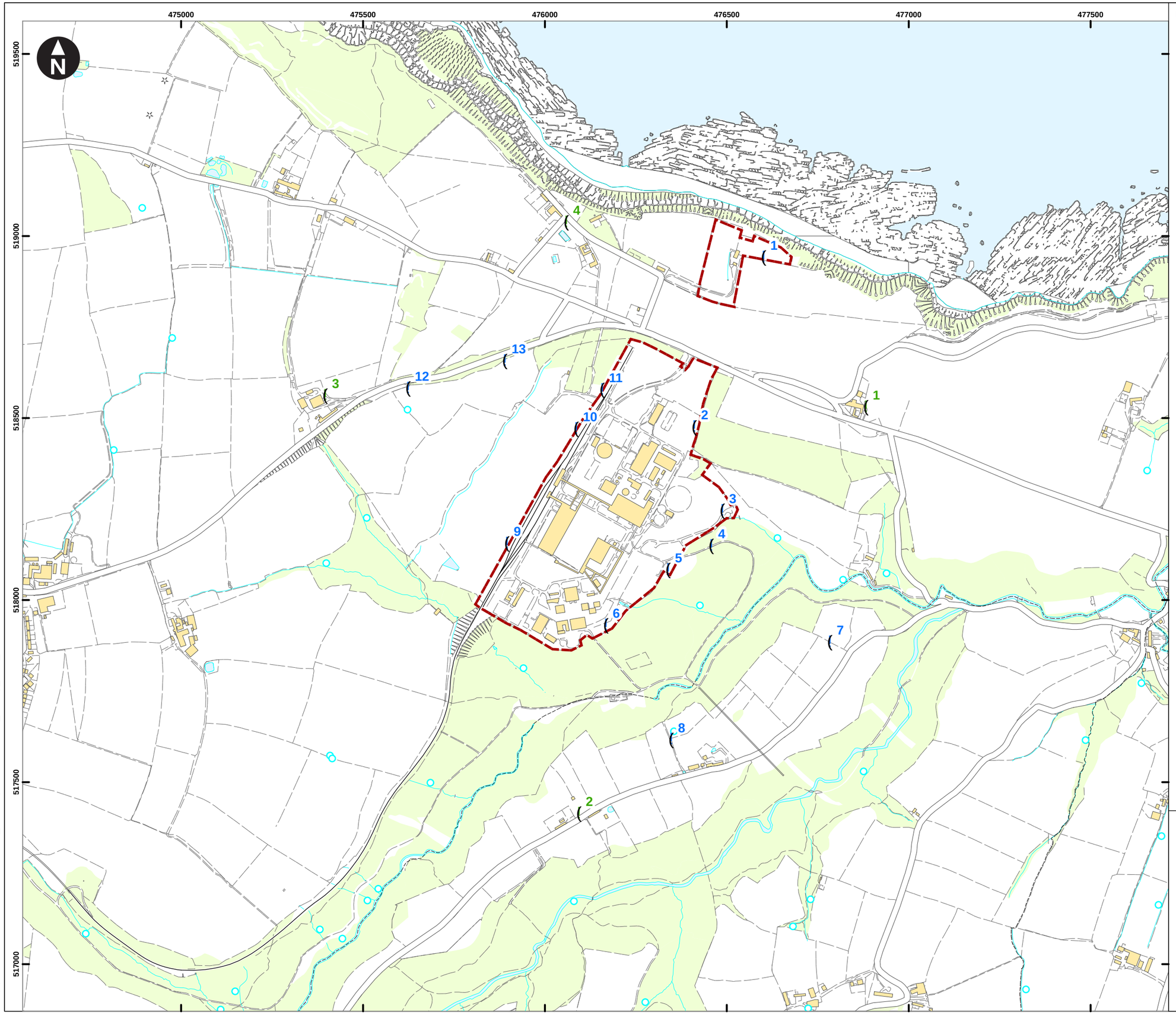
Environmental Topic	Scope of Assessment	Elements to be Scoped Out
	17472:2022 and PAS 2080 for carbon management in buildings and infrastructure, these sources of GHG emissions come under the following categories: ■ B1 Operational Consumables ■ B2-5 Maintenance, Repair, Replacement and Refurbishment ■ B6 Operational Energy Use ■ B7 Operational Water Use ■ B8 Users Utilisation (transport).	required beyond those incorporated as part of routine operational activities. ■ C1-4 End-of-life Phase: emissions have been scoped out due to uncertainties around decommissioning techniques at the proposals end of life (20 years) relating to the forecast decarbonisation of fuels used in decommissioning plant and equipment. It is therefore not possible to proportionally assess impacts and effects during decommissioning. Impacts of GHG emissions are global and cumulative in nature, with every tonne of GHG emissions contributing to impacts on natural and human systems. GHG emissions result in the same global effects wherever and whenever they occur and, therefore, the sensitivity of different human and natural receptors is not considered, as the impacts of GHG emissions relate to their contribution to global warming and climate change as a whole.
Climate Change	Each topic scoped into the EIA will consider climate change as it is relevant to that subject. This will include how the future baseline of the relevant study area will be affected by climate change (e.g. biodiversity changing in response to climate change, which could change the habitats and species under consideration), and also how the operational mine may be affected by climate change (e.g. the flood risk assessment will considered increased flows from more intense rainfall events).	
Human Health	Details will be provided within the ES on the health and safety procedures and safeguards which are relevant to the operation of the mine for employees and visitors. This will include the impact of major accidents or disasters.	Any impacts on human health from the operations of the mine on external receptors such as local residents or tourists (e.g. air quality), will be covered in the appropriate chapters, if considered significant and scoped into the EIA.

Table 4.2 below sets out the proposed viewpoints which will be used as part of the Landscape and Visual Assessment section of the ES. These viewpoints are being proposed in order to provide information to assess the existing effects of the surface mine area in the local area.

Table 4-2 – Visual assessment: Proposed viewpoints

Viewpoint reference	Grid reference	Receptor type and reason for selection
A174/Ings Farm/PRoW	475381, 518459	Gateway road into the National Park, southbound road users and PRoW users
Boulby Bank	475686, 518949	Nearby residential receptors and minor road users
Staithes, Tourist Information Centre	478113, 518505	Nearby residential and tourism receptors
Cleveland Way/England Coast Path	477020, 518741	Recreational users on the national trails and within the Heritage Coast
Properties on Ridge Lane	476125, 517455	Nearby residential receptors and PRoW
Hinderwell	479010, 517146	Residential receptor and users of A174
Ellerby	479939, 514787	Residential receptor and PRoW
Newton Mulgrave (western edge)	478690, 515583	Residential receptor and minor road users
Roxby Lane	476516, 516465	Nearby residential receptor and minor road users
Danby Beacon	473634, 509297	Hill top, local landmark and visitor destination


Key
Boulby Mine site boundary
5km study area
2km buffer
Only chimney stack would be theoretically visible
Rock Shaft Tower and Main Building (including combined with Chimney Stack) would be theoretically visible
Chimney Stack
Main Plant Building
Rock Shaft Tower
Viewpoints
1) A174 / Ings Farm / PRoW
2) Boulby Bank
3) Ridge Lane
4) Cleveland Way / England Coast Path
5) Staithes, Tourist Information Centre
6) Roxby Lane
7) Hinderwell
8) Ellerby
9) Kettleness
10) Danby Beacon
Notes:
This figure has been based on the following parameters:
Height of chimney stack above ordnance datum: 167.52m
Height of stack above ground level: 87.5m
Height of rock shaft tower above ordnance datum: 132.81m
Height of rock shaft tower above ground level: 51.05m
Height of main plant building above ordnance datum: 121.86m
Height of main plant building above ground level: 41.04m
0 1 2 3 km
Scale at A3:1:50,000
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Boulby Mine New Development
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Figure 4.1
Zone of Theoretical Visibility (ZTV) with LVIA Viewpoints
June 2026
Workspace - Boulby Mine
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Key

Operational area

Existing air quality monitoring point

1. Tailings
2. Reservoir
3. Interceptor pit
4. Rabbit Hill
5. Explosive stores
6. Mine End
7. Staithas
8. Ridge Lane
9. RLO (S)
10. RLO (Central)
11. RLO (N)
12. Three Cross Wells (N)
13. Three Cross Wells (N.Gate)

Proposed monitoring point (noise and air quality)

1. Red House Farm
2. West Ridge Lane Farm
3. Ings Farm
4. Boulby Grange

0 100 200 300 400 500 600 m

Scale at A3:1:10,000

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Ordnance Survey 0100031673

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Figure 4.2
Noise and Air Quality monitoring locations

June 2026

Workspace - Boulby Mine

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