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1 THE YORK POTASH PROJECT

1.1 Introduction

The Non-Technical Summary

1.1.1 This document provides a Non-Technical Summary (NTS) of the Environmental Statement (ES) produced in support of applications to the North York Moors National Park Authority (NYMNPA) and Redcar and Cleveland Borough Council (RCBC) to develop the York Potash Project (YPP) Mine, and the associated Mineral Transport System (MTS) and Materials Handling Facility (MHF).

1.1.2 The full ES presents the findings of an Environmental Impact Assessment (EIA) undertaken on behalf of York Potash Limited (YPL) into the potential impacts of the construction, operation and eventual decommissioning of the Mine, MTS and MHF. It does not address the proposed Harbour facility, which is covered in a separate application that will be made to the Planning Inspectorate later this year.

1.1.3 This NTS mirrors the general structure of the ES and is presented as follows:

- **Part 1 - The Project Description, Background and Legislative Context**
  This section summarises the introductory chapters (Chapters 1 to 5) of the ES and describes the YPP and the legislative context for the EIA process.

- **Part 2 - York Potash Mine**
  Part 2 summarises the ES technical chapters which consider the predicted impacts associated with the development of the Mine. Part 2 is concerned with the Mine itself and, particularly, its surface development at Dove’s Nest Farm.

- **Part 3 - MTS**
  Part 3 summarises the ES technical chapters which consider the predicted impacts associated with the development of the MTS and, particularly, its surface development at intermediate shaft sites to be located at Lady Cross Plantation, Lockwood Beck and Tocketts Lythe.

- **Part 4 - MTS Portal and MHF**
  Part 4 summarises the ES technical chapters which consider the predicted impacts associated with the development of the MTS Portal (the tunnel exit) and MHF at Wilton.

- **Part 5 - The cumulative impact assessment**
  Part 5 summarises the Cumulative Impact Assessment (CIA) that has been undertaken in order to consider the predicted impacts of the YPP as a whole and of the YPP with other relevant (non-YPL) projects.

1.1.4 This NTS summarises the information provided in the chapters of the ES and the conclusions reached. For more detailed information please refer to the corresponding chapter within the ES.
Background to the York Potash Project

1.1.5 YPL intend to develop a new mine at Dove’s Nest Farm, South of Whitby, in North Yorkshire. The area of interest for the mine lies between Scarborough and Whitby, extending approximately 16 kilometres (km) inland from the coast and 14km offshore (Figure 1).

1.1.6 The geology in and around North Yorkshire contains world class deposits of polyhalite; which is a naturally occurring mineral that provides a source of potassium, sulphur, magnesium and calcium typically used as a fertiliser. YPL proposes to extract mineral deposits from two deep polyhalite seams which lie beneath the North York Moors National Park, one of which extends eastward underneath the North Sea. Once extracted, the dry mineral would be crushed and transported, without chemical processing, via an underground conveyor system (the MTS) to the MHF at Teesside. The mineral would then be prepared for onward distribution via a Harbour facility.

1.1.7 It is proposed that once the project has been constructed there would be an incremental increase in production for the first 6 years (from 6 million tonnes per annum (Mtpa) once fully operational) until a full capacity of 13Mtpa is achieved. The Mine is anticipated to have longevity of approximately 100 years.

1.1.8 The project would encompass four main geographical locations:

1. The surface development site for the Mine (the minehead), including associated facilities and an MTS shaft, would be located at Dove’s Nest Farm, near Whitby. Linked to the Mine development, Construction Park and Ride facilities and a Construction Village (which remains an option) would be located 1.6km south of Whitby. There would also be an Operational Park and Ride located 2km east of Whitby (at Cross Butts).
2. The underground MTS would extend approximately 36.7km from Dove's Nest Farm to Wilton (Teesside) and have three shafts (MTS access points) installed along the route, located at Lady Cross Plantation (a site 8km from the minehead and within the National Park), Lockwood Beck (a site 24km from the minehead and outside the National Park) and Tocketts Lythe (a site 29.5km from the minehead).
3. The MTS Portal and MHF would be located in Wilton, Teesside.
4. The Harbour facility would be located adjacent to the Port of Teesside on the River Tees, joined to the MHF by means of conveyors (a separate application is to be made to for this facility).

1.1.9 The Mine is predicted to be operational from 2019.

The Applicant

1.1.10 YPL is a subsidiary of Sirius Minerals plc, a potash development company listed on the AIM market of the London Stock Exchange. YPL’s primary focus is on the development of the YPP in North Yorkshire.
Project Need

1.1.11 Potash is an important source of potassium which is added to agricultural fertiliser and used to replace potassium removed during the production of crops. Replacing potassium leads to a greater crop yield, strong harvests and increased land recovery. The potash that is the target of the YPP is polyhalite, a form of potash which uniquely combines potassium, magnesium, sulphur and calcium, making up four of the six nutrients vital to plant growth.

1.1.12 Globally, potash demand is high and currently rising. As population growth continues and developing economies strengthen, agricultural systems are under increasing pressure to produce more food and increase productivity on a finite amount of agricultural land. Higher demand for animal protein requires greater efficiency from grass and arable land to produce food for livestock. An increasing interest in biofuel is also compounding the need to make farmland as productive as possible.

1.1.13 The YPP aims to extract large qualities (13Mtpa) of high grade potash for approximately 100 years. This would secure an important source of potash within the UK and globally which would help farmers meet the demand for increased food production. It would also create opportunities for jobs locally and regionally bringing wealth, employment and skills to the North Yorkshire area.

1.2 Consideration of the Alternatives

Project Design Alternatives

1.2.1 The design of the project has evolved in order to respond to engineering and environmental concerns that have been identified through the project’s life to date. One major change from the original proposed scheme is the design and construction of the underground MTS.

1.2.2 Normally, extracted minerals are processed at the mine site, stored and transported as required. To minimise the need to industrialise land within the National Park and to make use existing industrial facilities it was decided that extracted minerals would be exported raw and processed outside of the park at a suitable site nearer to a port.

1.2.3 After reviewing several options for transporting the minerals, road and rail transport were discounted due to the negative impacts of increased traffic on local transport networks. As an alternative, an underground transportation system was proposed. The initial design for this comprised a buried pipeline to be constructed to transport a liquidised form of the potash, however, it was determined that this option could result in significant construction impacts (e.g. landscape and visual effects) and would be technically difficult to implement. The MTS was proposed as an alternative to the pipeline, consisting of an underground conveyor belt system. This became the preferred option to be taken forward, and is the option assessed by the EIA.
**Alternative Site Locations**

1.2.4 A site selection assessment was undertaken for the minehead site to identify the most appropriate location. This study assessed the extent of the mineral deposit, important social and environmental receptors and the sustainability of operation. Four sites were initially identified as being potentially suitable. A further study looking at the advantages and disadvantage of each of the sites concluded that Dove’s Nest Farm site was most appropriate option.

1.2.5 The proposed alignment of the MTS was largely determined by the position of the Mine and the MHF and the availability of suitable geological conditions. To enable construction of the MTS and provide access to the tunnel during operation, three intermediate shafts between the Mine and the MHF are required. Six potential sites along the route of the MTS were identified, of which Lady Cross Plantation, Lockwood Beck and Tocketts Lythe were selected as the most suitable based on social and environmental factors.

1.3 **Project Description**

1.3.1 The YPP components covered by this NTS comprise three distinct elements (Figure 2):

- **The Mine** - the site where the winning (the process of opening of the ground to access the deposit) and working (the ore extraction process) of the polyhalite deposits would be undertaken.

- **The MTS and intermediate shafts** - a 36.7km underground transport system that would remove extracted ore from the Mine and transfer it to the MHF, and three access shafts.

- **The MTS Portal and MHF** - the MTS Portal is where the ore leaves the ground and enters the MHF where the mineral is granulated and stored before distribution.

**York Potash Mine**

1.3.2 The extraction of minerals would take place completely underground at a depth of approximately 1,300m below sea level (1,520m below ground level at Dove’s Nest Farm). Dove’s Nest Farm is located along the B1416 and within the boundary of the National Park (see Figure 3).

1.3.3 Most of the Mine infrastructure has been designed to be sub-surface, however there would be some infrastructure needed on the surface. The Dove’s Nest surface development would house the surface infrastructure required for the construction of the underground mine substructures (production shaft, service shaft and associated tunnels). There would also be an access shaft for the MTS within the Dove’s Nest site. The surface development is proposed to consist of the following structures:

- site access roads from the B1416;
- Mine shaft buildings (head frames);
- MTS shaft;
- exhaust shaft;
York Potash Project
Mine, MTS and MHF Overview

Legend:
- Minehead – Extent of Works
- Intermediate Shaft and Spoil Site – Extent of Works
- MHF and MTS Portal – Extent of Works
- MTS Tunnel Alignment
- North York Moors National Park

Client: York Potash Limited
Project: York Potash Project
Mine, MTS and MHF Environmental Statement

Title: York Potash Project
Mine, MTS and MHF Overview

Part: NTS
Figure: 2
Drawing No: PB1110-NTS-1-002

Rev: Date: Drawn: Checked: Size: Scale:
0 29/09/2014 LB GC A3 1:175,000

Co-ordinate system: British National Grid


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• power and ventilation buildings;
• Mine support building which would contain welfare areas, rescue facilities, security office, laboratory, control room, workshop and lay down area;
• Gatehouse;
• parking; and
• non-domestic wastewater treatment.

1.3.4 A construction duration of 58 months is anticipated and would require the sinking of the mine shaft, construction of underground and surface infrastructure, and subsequent landscaping/restoration of the site. It is proposed that work onsite would take place 24 hours a day, 7 days a week to minimise the duration of the construction period. Bunding and screening would take a high priority to reduce visual and noise impacts during the construction period.

1.3.5 Before the construction of the main mine shaft is started, a hard standing area would be built around the shaft location. This would support the temporary winding head frame, plant and equipment that would be used throughout the construction period. The temporary head frames used in the construction of the Mine and MTS shafts would be up to 45m high and would be in place for the duration of the construction phase.

1.3.6 Lighting would be required on site to ensure safe working conditions for workers during night time hours. A lighting design has been developed to minimise light spill, and lighting would only be used in those areas of the site where work is ongoing.

1.3.7 Materials excavated from the Mine, where possible, would be kept on site and used in the formation of bunds, earthworks and landscaping. Top soil and subsoil from earthworks would also be retained and used in the landscaping of the site.

1.3.8 During operation the 45m high temporary head frames would be replaced with operational Mine shaft buildings, which would be 12m high, 50m wide and 120m in length and would be largely screened by landscaping and trees. The welfare building would be 13.5m high, 20m wide and 140m in length and clad in Corten cladding, aluminium and timber.

1.3.9 Once the operational life of the Mine is complete, it would be plugged and capped. Safety barriers, gating and fencing would be installed to prevent risk to users of the area. Existing surface buildings would be removed and returned to agriculture, forestry or amenity use.

The MTS and Intermediate Shaft Sites

1.3.10 The MTS would be an underground conveyor belt system that would transport the mineral from the Mine to the MHF facility. Three shafts would be dug along the length of the MTS to facilitate the construction of the MTS and to provide access to the tunnel during the operational phase. These shafts would also require surface infrastructure and would include adjacent spoil placement areas, where material removed during the MTS tunnelling process would be stored and landscaped.
Surface infrastructure at each of the MTS Intermediate shaft sites would include:

- shaft platform and headframe (construction only);
- site office (construction only);
- lay down area (construction only);
- generator buildings and stack; and
- shaft access building;

It is predicted that the construction of the MTS would take 40 months with construction activities being undertaken 24 hours a day. Site preparation would take the first 6 months and would consist of the creation of a hard standing area for the construction of the temporary winding head frame (up to 45m high), site office, temporary site buildings and car park.

Once the winding head frames are constructed the shaft would be sunk, this is expected to take 14 months and would involve drilling and blasting in order to remove material. Once the shaft is sunk, the construction of each section of MTS tunnel is expected to take approximately 20 months, comprising 16 months of tunnelling and then 4 to 5 months of completion (fitting out).

Material excavated from the tunnel sections and shaft would be retained onsite as far as possible in a spoil placement area (see Figure 4 to Figure 6). This would be landscaped and restored using topsoil and subsoil removed during the site preparation works.

At the end of the construction period, the winding head frames would be removed and replaced with an agricultural style building 20m wide, 20m long and 8m high. A small area of hard standing would also be retained for parking. Buildings not required during the operational period would be removed and the site landscaped.

Once the operational phase has ended, the MTS sites would be decommissioned. As with the Mine, this would involve the plugging and capping of the shaft and the restoration of the land to either agricultural, woodland or amenity based uses.

The MTS Portal and MHF

The MTS Portal and MHF site would be located on a 37ha site at Wilton. The MHF would consist of the plant and equipment required to process the mineral that is extracted from the Mine. The mineral would reach the surface and leave the MTS via the MTS Portal, where it would then enter the MHF for processing.

During processing the mineral would be crushed, screened and granulated into pellets, this would take place in a granulation plant. The granulated polyhalite would then be transferred into the product storage facility.
Legend:

- Intermediate Shaft and Spoil Site – Extent of Works
- North York Moors National Park
1.3.19 The MHF site would require the following infrastructure (see Figure 7):

- granulation and process buildings;
- storage building
- administration and support facilities;
- engineering store;
- Office Building;
- Control Room; and
- car park.

1.3.20 The construction of the MTS Portal and MHF is expected to take 29 months. Site preparation would include the stripping of topsoil and subsoil from the construction areas which would be retained and reused during landscaping. During this period the site drainage system would also be constructed and, where necessary, existing drainage would be altered.

1.3.21 The MTS Portal works would begin with the construction of a working platform. Once this is completed the Portal walls would be constructed, along with the excavation of the tunnel ramp. After this the initial tunnel excavation would be undertaken until it reaches a level of 348m, at this point the tunnel walls, roof and base would be completed.

1.3.22 For the MHF, all process buildings would be braced steel framed structures and fully clad to minimise dust and noise. It is expected that a mix of reinforced concrete and piling would be required for the foundations of some of the process buildings. The granulation building would be approximately 50m x 20m x 30m high. Other process buildings include the locomotive shed, emergency Run of Mine (ROM) store, secondary crushing and ore storage, classification buildings, High Pressure Grinding Rolls building and finished product screening.

1.3.23 The product storage facility would consist of an onsite storage area capable of storing around 700,000 tonnes of granulated polyhalite. The storage building would be 45m high, 500m in length and 120m wide.

1.3.24 During decommissioning all process machinery would be dismantled and removed and the demolition of onsite buildings would occur. Where possible material removed would be recycled and foundations left in place. The site would be returned to as close to ‘green field’ conditions as possible. The MTS Portal would be in-filled and exposed concrete broken up and removed for recycling.

1.4 The EIA Process and Method

Legislation

1.4.1 As a mining project with surface infrastructure, EIA is required for the YPP as detailed in the Environmental Impact Directive (EIA Directive 85/337/EEC) and Schedule 2 of the EIA Regulations (Town and Country Planning (EIA) Regulations 2011). The purpose of this is to identify the beneficial and negative impacts of a project so that an informed decision can be made by the appropriate planning authorities on whether the project should be granted consent. The outcomes of the EIA process are reported in the ES.
1.4.2 An application has been made jointly to the NYMNPA and RCBC for the Mine and MTS; and applications are to be made to Scarborough Borough Council (SBC) and the NYMNPA for the Construction Village and Park & Ride and the Whitby Operational Park & Ride facilities respectively. A separate application has been made to RCBC for the MHF.

The EIA

1.4.3 EIA is a tool used to assess the nature of project’s likely environmental impacts (both positive and negative) to enable authorities, and the public, to understand the potential impacts of the project before making decisions on whether consent for the development should be granted. The final reporting of the EIA process, the ES, contains:

- A description of the development, including any alternatives considered.
- A description of the existing environment at the site and surrounding areas.
- A prediction of the potential impacts on the existing human, physical and natural environment at the site and assessment of the perceived effects.
- A description of mitigation measures employed to avoid or reduce any perceived significant effects.

1.4.4 Consultation is an ongoing part of an EIA that seeks the opinions of the planning authorities, statutory agencies, companies and individuals which may be impacted by the application (stakeholders).

Assessment Methodology

1.4.5 In order to assess the impacts that a project may have with respect to a particular environmental topic (e.g. air quality or recreation) it is important to look at the current conditions (or baseline) in the area that could be affected (the study area). This tends to be done through either desk study or site survey (or both).

1.4.6 Each chapter of the ES outlines the methodology used for the assessment of that topic. Assessment methodologies differ between topics but largely follow a similar overall approach. This approach identifies any people, places, characteristics and habitats that may be affected (the ‘receptor’) and determines how sensitive this receptor is to impacts (the ‘sensitivity’), based on is importance, adaptability, tolerance and recoverability. Effects that could arise due to the project are identified and the severity of the effect predicted (the ‘magnitude’) is determined. The level of magnitude that would arise is dependent on how much change the receptor is likely to experience from baseline conditions. The magnitude of the effect and the sensitivity of a receptor are then used to determine the significance of the ‘impact’. In general, where impacts are predicted to be moderate or major, they are considered to be ‘significant’.

1.4.7 Where negative impacts are predicted to occur, where possible, mitigation is identified that can be used to reduce the impact as far as possible. Mitigation tends to be in two forms; mitigation that is built into the design of the project to reduce impacts that are identified at an early stage and mitigation that is proposed in response to the impacts predicted in the EIA. Impacts are then reassessed, taking into account the proposed mitigation measures, to provide a residual impact.
2 YORK POTASH MINE

2.1 Introduction

2.1.1 Each topic examined with respect to the predicted impacts associated with the Mine is considered below in turn. The key outcomes are highlighted. The same approach is then adopted for the MTS and the MTS Portal and MHF.

2.2 Traffic and Transport (Mine, MTS and MHF)

2.2.1 An initial desk study, informed through consultation with the NYMNPA and North Yorkshire County Council (NYCC), was undertaken with the aim of determining how additional traffic from the Mine site would impact on current road users over the Mine’s lifetime.

2.2.2 As many of the routes proposed for use by the construction vehicles and workers would be similar for the Mine, MTS and MHF sites a single traffic and transport assessment was completed covering all three elements of the project, as well as the Harbour facility and other relevant committed development. In particular, due to the close proximity of the Mine and MTS sites, impacts on traffic and transport are likely to be combined.

2.2.3 Based on the outputs of a detailed modelling exercise, three places along the A171 (road links 21, 23 and 27) are expected to experience a greater than 60% increase in traffic is predicted due to the YPP, with the result that pedestrians would experience a moderate adverse impact on their ability to cross roads during the Mine and MTS construction periods (without mitigation). Links 25 and 45 on the A171 are expected to have a greater than 100% increase in HGV numbers using them, which is expected to have a major adverse impact on the quality of pedestrians enjoyment of their journey at these points.

2.2.4 Increased traffic in excess of 1,200 vehicles per hour, or more than 2000 HGVs per hour during the construction period, is expected to have a major adverse impact on the levels of intimidation felt by pedestrians at links 7 (A174), 21 (A171), 23 (A171), 30 (A171) and 41 (A170). Increased traffic of between 600 and 1200 vehicles an hour, or 1000 and 2000 HGVs per hour, is predicted to have a moderate adverse impact on levels of pedestrian intimidation at links 3 (A1053), 5 (A174), 10 (A171) and 17 (A171).

2.2.5 Given this, in areas where negative impacts to pedestrians have been identified, a variety of measures have been proposed in order to reduce impacts. These include: new and diverted pedestrian routes; speed controls; and proposals for improved crossing points.

2.2.6 It is predicted that after mitigation there would be no significant impacts on road safety as a result of the increased traffic forecast.

2.2.7 Driver delays due to increased traffic during the construction period are likely to occur at a signalised junction between the A171 and A174 (Junction 1, Waterstead Lane), with a queue of 86.2 vehicles predicted along the A171 Mayfield Rd Junction (Lanes 2 & 3). To avoid this, improvements to the junction have been proposed that would result in an overall beneficial effect. Two further junctions, between A171 and A170 (Junction 4, Scarborough) and the A64 and A170 (Junction 5, Scarborough),
are likely to experience moderate delays to drivers due to increased flow, with predicted queues of between 52.7 and 94.0 cars at Junction 4 and between 0.4 and 66.8 vehicles at Junction 5. To reduce these impacts at both junctions a shared transport scheme for employees has been proposed.

2.2.8 During the operation period there would be significantly fewer employees traveling to the Dove’s Nest and MTS and MHF sites, as well as little or no HGV traffic, reducing traffic flow to near current existing levels. All impacts to pedestrians and road users from additional traffic during the operational period are predicted to not be significant.

2.2.9 A number of associated developments (e.g. Park & Ride schemes) are proposed to enable the efficient delivery of the construction the YPP, and also to limit and mitigate the potential impacts arising from the workforce accommodation and transport needs of the YPP.

2.3 Amenity and Recreation

2.3.1 Impacts on existing levels of amenity and recreation were assessed through a desk study looking at the area within the National Park and extending to the coastline to include Robin Hood’s Bay; the Public Rights of Way (PRoW) network which connects Whitby, Scarborough and the NYMNP; and two routes into the NYMNP, the A170 and the A169.

2.3.2 Although no PRoWs exist within the Mine site itself, increases in the traffic volume would result in users of PRoW 319655s crossing the A171 at Enterprise Way (link 23) and users of PRoWs 30.5/3/1, 30.5/5/1 and 30.3/11/1 at link 27 experiencing a moderate adverse effect with respect to their ability to continue along the PRoWs (due to severance). PRoW 319655, 30.5/3/1, 30.5/5/1 and 30.3/11/1 are assessed as being of local importance and the duration of the increased HGV traffic would be for the 58 month construction period. Therefore, due to the intermittent exposure of walkers to this impact (only at crossing points) and its temporary nature, it is predicted to result in a short-term intermittent negligible impact.

2.3.3 Increased traffic along the B1416 at link 25 would result in a major adverse impact on pedestrian amenities on PRoWs 333022, 313660, 313661 and 313662. PRoWs that cross the B1416 would be temporarily diverted to maintain connectivity and minimise the impact at crossing points. This would result in a residual impact of temporary, intermittent minor adverse significance.

2.3.4 No other significant impacts on recreation or local amenity users have been identified during the construction, operation or decommissioning phases.

2.4 Noise and Vibration

2.4.1 The study area for the noise and vibration impact was determined through desk based research, the survey conducted as part of the traffic and transport assessment and through discussion with the NYMNPA.

2.4.2 Noise calculations show that construction activities at the Mine would cause a small noise increase (less than 10dB above existing background noise levels) due to general construction works (although this does not include noise generated from construction of the drift tunnel, which may require some
blasting). This small noise increase would represent a negligible impact on the nearest residential properties. As background noise levels at night are generally lower, Parkdown Bungalow would experience a minor adverse impact during the early construction works (Phase 1, months 5-6) and a moderate adverse impact at night during the Phase 2 works (months 7-13). Construction works at Soulgraves Farm during months 25 to 32 would result in a minor adverse impact during the day, whilst welfare building is constructed. With the exception of impacts set out above, the significance of the noise increase from other standard construction works would be negligible.

2.4.3 The drift tunnel construction would require a mix of drill and blast techniques which could combine to cause a temporary, adverse impact on noise levels at Soulsgrave Farm during the night. However, activities would be restricted to daylight hours only meaning, there would be no residual impact.

2.4.4 Vibration from construction work and blasting can sometimes be felt. In this case it has been assessed that there would be a negligible impact on all receptors; meaning that no significant vibration would be felt as a result of the Mine construction.

2.4.5 Increases in traffic caused by HGVs and workers arriving on site during the construction period are expected to result in a variety of effects on noise levels, ranging between no detectable effect to major short term effects (depending on the location, time of day, week and year). Moderate and major effects (depending on the road and time of day) are expected between 06:00 and 07:00 and between 22:00 and 23:00 for all days of the week both in the worst case (January) scenario and when averaged over the year; and in the period between 07:00 and 08:00 on Saturday and Sunday in the January scenario and just Saturday on the annual average scenario. This reflects times of the day when Mine associated vehicles are likely to be active at times where noise is generally lower, such as night or early morning, therefore resulting in a greater increase in noise.

2.4.6 The increase in noise from the Mine site during operation site is predicted to be less than 10dB at all areas tested, meaning that there would be a negligible impact to local properties. Additional road traffic during the operation phase generally would result in a negligible or minor increase in noise on local roads (depending on the time of day and specific road). In periods where roads are generally quiet, such as Saturdays and Sundays, there may be a moderate or major increase in road noise over short periods, in particular between 05:00 and 08:00 on Saturdays and Sundays and between 21:00 and 22:00 on Sundays.

2.4.7 During decommissioning the impacts associated with noise and vibration would be similar to those experienced during the construction period, however, for a shorter duration.

2.5 Air Quality

2.5.1 An air quality assessment looking at potential impacts due to dust, air emissions and traffic emissions from the Mine was undertaken. Different study areas were used depending on the source and nature of the emission type.

2.5.2 Impacts during construction are expected to have no or a negligible impact only. Specifically, the construction of some of the bunds would require the movement of a large volume of subsoil and topsoil. This is expected to cause the release of dust and air particles with the potential to cause a negligible to
minor adverse impact on air quality at Parkdown Bungalow for the duration of these works (3 months). Dust and particulate release during construction would be controlled through the use of best practice site management procedures.

2.5.3 The North York Moors National Park Management Plan outlines the need to maintain dark skies at night and unpolluted air in the National Park. Dust and airborne particles during construction are predicted to have a minor, localised and temporary adverse impact on air quality in the park.

2.5.4 Additional traffic fumes during the construction period would be limited and cause a negligible or minor adverse impact on humans. However, nitrous oxide (NOx) levels caused by traffic fumes are expected to be above recommended ecological air quality objective levels (30µg.m$^{-3}$) at points tested nearest to the A171. Concentrations away from the road would reduce greatly and, therefore, it is assessed that there would be a temporary impact on a small section of habitat adjacent to the road during construction.

2.5.5 During operation it is predicted that there would be no impact or a negligible impact on humans and the ecosystem as a result of traffic fumes or fumes generated by onsite equipment during operation. During decommissioning, it would be expected that impacts would be similar to those seen during construction and, therefore, not significant.

2.6 Socio-economics

2.6.1 A desk study that considered the impacts on the social and economic environment due to the construction, operation and decommissioning of the Mine was undertaken and assessed different geographical and economic areas (local, district, regional, national, commuter zone and economic plan areas).

2.6.2 During the busiest construction period, approximately 645 construction workers would be employed on site. There is a large pool of workers within commutable distance to the Dove’s Nest site, however, specialist skilled contractors would be required for some elements of the construction. It is anticipated that 34% of recruitment (225 workers) would come from within the Doves Nest commuter zone (DNCZ) with the remainder (420 workers) being brought in from a wider area. The overall result of this increase in employment would be a temporary minor beneficial impact within the commutable area (DNCZ level).

2.6.3 Employees travelling a non-commutable distance are likely to require accommodation, resulting in wealth and job opportunities being created in the local area. This would cause a temporary, minor beneficial impact on the local economy within the commutable area (DNCZ level). It is also anticipated that employees are likely to spend money, indirectly benefiting local wealth and employment. It has been assessed that up to 660 indirect jobs would be created to service the needs of the Mine (at its 13Mpta capacity) and its workers during construction, and that this would have a minor beneficial impact within commutable distance of the National Park.

2.6.4 The cost spend by YPL for the construction of the Mine is expected to be £607m for the 6.5Mpta Mine and a further £136m for the 13Mpta Mine. YPL is committed to using local suppliers where possible and this expenditure would create 440 indirect jobs within the supply chain. The additional wealth and jobs
created would result in a temporary, short term minor beneficial impact at a Local Economic Plan (LEP) level.

2.6.5 During the Mine’s operation, 725 permanent jobs would be created (by the 13Mpta output), these workers would be expected to be drawn from an area within 60 minutes’ drive from Dove’s Nest. This would represent a 4.3% increase in the number of jobs available within the National Park and would have a major beneficial impact at this level and minor beneficial impact at the LEP level.

2.6.6 The loss of direct and indirect employment at the end of operation and following completion of decommissioning is inevitable and would result in adverse impacts, however, these should be considered against the longevity of the benefits over the 100 year (at least) lifecycle of the Mine. Aside from the loss of employment, all impacts would be expected to be negligible or lower.

2.7 Ecology

2.7.1 Ecological impacts at the Mine site were assessed through desk study and extensive field surveys which focused on the surface development site plus an additional 50m buffer from the site boundary. From badger surveys a 2km buffer zone was used and for great crested newt surveys a 250m buffer zone was used.

2.7.2 The Mine site is not within a designated site for nature conservation, such as a Site of Special Scientific Interest (SSSI), Special Area of Conservation (SAC) or Special Protected Area (SPA). Habitat types found in the Dove’s Nest study area are considered to be common, with no special value.

2.7.3 Common pipistrelle and brown long-eared bats, which are a European Protected Species (EPS) were found living in the Dove’s Nest Farm buildings. Construction works would require the removal of these farm buildings, which requires an EPS licence. The removal of bat roosts is predicted to result in a major adverse impact on the bats in those roosts. In order to reduce the impact, a minimum of 20 bat boxes would be installed on the site. During the operational period, the bat boxes would result in a moderate beneficial impact by increasing the amount of suitable roosting areas.

2.7.4 Common reptiles have been found onsite and habitat suitable for basking and sheltering habitat is likely to be lost as part of the site preparation. Through habitat manipulation, reptiles would be encouraged to move into suitable habitat in neighbouring areas before the main site clearance works begin, in order to reduce the potential for harm. With this strategy being followed it is predicted that there would be minor adverse residual impact on reptiles.

2.7.5 The Mine site was found to be a source of food and nesting habitat for birds, although not of high quality. Vegetation clearance and loss of land during construction would have a moderate adverse impact on feeding and breeding birds in and around the site. It is illegal to intentionally or unintentionally injure or disturb breeding birds, so to avoid disruption, and in keeping with best practice, ground clearance would be scheduled outside of the breeding season where possible. Where this is not possible, ecological surveys would be undertaken to find and mark birds’ nests prior to ground clearance. Where nests are found they would be avoided during ground clearance works.
2.7.6 During the operational phase, landscaping and habitat restoration of the site, once matured, would provide additional nesting habitats for birds and would be anticipated to have a moderate beneficial impact on nesting and feeding birds on site.

2.7.7 In the decommissioning phase, where habitat has been created this would be left undisturbed.

2.8 Landscape and Visual Environment

2.8.1 A landscape and visual assessment was undertaken to identify changes in landscape and the appearance of the area of the Dove’s Nest site as a result of the Mine’s construction, operation and decommissioning. The assessment was based on View Points (VPs) within sight of the development.

2.8.2 The construction of the Mine would require the removal of the farm buildings at Dove’s Nest Farm as well as changes to fields, hedgerows and the felling of 13ha of woodland. It is predicted that the Mine surface development would result in a moderate adverse impact on the landscape of the moorland to the east of the site (parts of Graystone Hills, Latter Gate Hills and Normanby Hill top) and to the wider inland region (hinterland) of the Whitby to Cloughton coastal area. It is also predicted that the Mine site would also have a major adverse impact on the landscape of the Ugglebarnby Moor during construction due to its proximity and visibility to the moor.

2.8.3 The Mine site is generally well hidden from view and screened by woodland; this would increase during the operational period, once planted trees have matured, providing additional cover. However, during construction a temporary 45m winding tower and cranes up to 76m tall would be required and would have moderate adverse visual impacts on residents in Stainsacre, Low Hawsker and High Hawsker; all of which would be in line of sight the Mine site. There would also be moderate adverse visual impacts at Catwick House Farm and Middle Rigg and a major adverse impact on views from the garden of Parkdown.

2.8.4 For safety reasons, aviation lighting would be placed on the winding tower and cranes during construction. From most views this would result in a negligible impact, however, VP 5 (moorland approximately 0.15km from the development site) and VP 6 (view from the B1416, 38m from site) would experience a moderate increase in lighting at night; and current dark sky conditions in the National Park would be affected by this and local construction activity at night.

2.8.5 The Mine’s construction phase would also be likely to cause significant landscape changes that would affect four of the fourteen of the National Park’s special qualities. Views from open moorland areas, archaeological features and public paths and tracks are likely to be significantly adversely affected by the construction phase. There would be a moderate adverse impact on the use of the area for artistic, scientific and literary inspiration.

2.8.6 Users of PRoW would experience a range of adverse visual impacts depending on their location; in particular users of the Coast to Coast walk, National Cycle Route 1, Moor to Sea Cycle Network and The Cinder Track would see some of the site at points along these routes. Views from some local PRoWs, such as the four footpaths at Sneaton and two bridleways at Eskdaleside-cum-Ugglebarnby, would experience varying degrees of adverse impacts. Visual impacts would also be likely on PRoWs in wider open and higher areas, such as those found in the surrounding moorland. Recreational users
of the Graystone Hills, Normanby Hill Top and Latter Gate Hills area and the Sneaton Low Moor/Low Moor area would experience some minor to major visual impacts, depending on their viewpoint.

2.8.7 Visitors to the funeral barrows to the south east and west of the site would experience moderate to major visual impacts during construction due to the presence of the winding tower, generator stacks and cranes. Also, road users travelling along the B1416 and A171 would experience minor to major visual impacts in some areas along these roads and moderate visual impacts along Raikes’ Lane and May Beck Farm Trail. Minor visual impacts would also be experienced from Sneaton Thorpe Lane, Stainsacre Lane and Back Lane.

2.8.8 Most of the impacts experienced during the construction phase would be caused by tall structures or disturbance. During the operational phase, the winding tower would be replaced by a single storey building covering the shaft entrance and the cranes would be removed. The Dove’s Nest Farm site would be landscaped and screened by trees and, therefore, all significant impacts identified during the construction period would be resolved.

2.9 Cultural Heritage

2.9.1 A desk based study focusing on the Mine site and a 500m area around to the site boundary was undertaken to assess predicted impacts on cultural heritage. In addition, a geophysical survey, two archaeological surveys during earth moving works and a Light Detection and Ranging (LiDAR) survey were undertaken to develop an understanding of the site.

2.9.2 Six non-designated cultural heritage assets were found within the site boundary, these include: a possible undated enclosure in the north of the site; a modern enclosure in the north-east of the site; a possible undated earthen mound to the west of Whinny Wood; 19th century Doves Nest Farmhouse; a post-medieval embanked boundary within the south of Haxby Plantation; and an undated earthwork within the west of Haxby Plantation.

2.9.3 Dove’s Nest Farmhouse (and farm buildings) would be demolished during construction, but the farmhouse is considered of low cultural value and its loss would not significantly impact on the historic environment of the area. The enclosures in the north and north-east of the site boundary would be largely unaffected by the Mine construction but may be affected by the site preparation works. However, due to the low level of cultural importance of these features, the impact would be minor adverse. Archaeological monitoring would also be undertaken during the ground works near the enclosures, providing a residual impact of negligible significance.

2.9.4 A minor adverse impact on the embanked boundary at Haxby Plantation would be expected during the construction of the access road between the welfare compound and the B1416. However, with mitigation in place, this would represent a negligible residual impact. The existing Haxby earthworks would be completely removed by the site preparation work and the construction of the inert storage area. The asset is considered of low importance and the impact predicted to be negligible.
2.9.5 In the wider area, sixteen cultural heritage interest features have been identified, eight Grade II listed buildings, seven Scheduled Monuments, archaeological remains of varying age and a conservation area. Visitors to these features would expect to experience temporary minor adverse impacts from the presence of high structures and construction activities; however, these would end after the construction period.

2.9.6 Several local cultural features would be within the line of sight of the Mine, causing a minor or negligible impact for visitors to the Scheduled prehistoric barrows and Postgate Cross on Low Moor, the Hawsker Wayside Cross, the Scheduled moated site at Low Laithes Farm and Whitby Abbey.

2.9.7 During the Mine’s operation, the site’s infrastructure would be reduced, with tall structures being either removed or replaced with lower buildings which would be largely screened by woodland. The site would not cause a significant impact to visitors to cultural heritage attractions. There are not predicted to be any significant impacts during either the operation or decommissioning phases of the project.

2.10 Geology and Hydrogeology

2.10.1 A desk study assessing the impacts of the Mine was undertaken, which focused on a study area that included the site and the area within 500m of the site boundary. However, where impacts had the potential to spread further, the maximum distance of the impacts potential range was included in the search area.

2.10.2 Three ground water aquifers were identified within the study area, these were: the Moor Grit Aquifer; the Scarborough Aquifer (which both contribute to the Sneaton Thorpe Beck Brook); and the Cloughton Aquifer, which contributes to the Littlebeck Brook. Five habitats sensitive to changes in water quality were also identified, four at Ugglebarnby Moor and one at Sneaton Low Moo; and four springs which are considered to be sensitive to changes in water quality were identified.

2.10.3 During the construction of the shaft platform there would be the potential for groundwater flow to be reduced and a general lowering in the water table, this would result in a major adverse impact on water dependant habitats at Ugglebarnby Moor. There would also be the potential for moderate adverse impacts at Moorside Farm Spring and Moor Grit Aquifer due to changes in groundwater flow speed and direction, water level and the rate with which the aquifer refills. However, mitigation designed to maintain the level of water flow has been built into the platform design which would reduce all impacts to minor or negligible adverse significance.

2.10.4 There would also be the potential for minor adverse impacts on the chemistry of groundwater from the grouting of substructures; from run-off during construction works; and from the mining waste facilities. These impacts would be unlikely to have an adverse impact on the overall quality of groundwater and are not, therefore, predicted to be significant.

2.10.5 During the operation of the Mine there would be a low magnitude permanent impact on groundwater flow speed, resulting in a minor adverse impact on the Moor Grit aquifer; however, the impact would not significantly alter existing conditions. Construction of the permanent mining waste facility would also result in a permanent minor, but not significant, reduction of groundwater levels and flow of the Moor Grit aquifer.
2.10.6 Impacts during decommissioning would be similar to those during operation and, therefore, not significant.

2.11 Hydrology and Flood Risk

2.11.1 The assessment of hydrology and flood risk was undertaken through a desk study concentrating on the Mine site but considering any area where the potential for impacts existed. Due to the amount of soil moving and handling required during construction the potential would exist for soil to be washed into the tributaries that flow into the Rig Mill/Long Mill Beck water body. The Rig Mill/Long Mill water body is currently assessed as being of poor ecological condition and, therefore, the potential for a major adverse impact to water based habitats as a result of additional sediment in the river exists. Consequently, mitigation designed to minimise the volume of soil washed into streams and rivers during construction would be implemented, and the residual impact would be negligible.

2.11.2 Changes to the existing drainage, including the construction of two culverts and an outfall drain, would cause changes in the flow and behaviour of surface water onsite, as well as creating the risk of soil entering the river, and create the potential for a moderate adverse impact to arise with regard to the water quality of Sneaton Thorpe Beck. Following best practice guidelines for the construction of the culverts and drainage system, and the implementation of a plan to restore natural habitats where possible after construction, would reduce the residual impact to a negligible level.

2.11.3 The accidental release of lubricants and fuel oils during construction activates was identified as having the potential to result in a major adverse impact on the quality of water bodies. However, the risk of an accidental spillage is considered to be low. Best practice guidelines designed to reduce the risk of accidental spillage would be followed during construction, thereby reducing the significance of the residual impact to a negligible level.

2.11.4 Other potential impacts to the hydrological baseline or flood risk include: discharge of treated sewage effluent and reduced water flows in spring during the operational phase; both of which were predicted to have a negligible impact.

2.11.5 Impacts during the decommissioning phase would be similar to those identified during the construction period, and would not be significant.

2.12 Land Use and Soils

2.12.1 The assessment for land use and soils was undertaken through a desk study focusing on two search areas, the local study area (which includes the site boundary plus a 500m buffer) and the regional study area, which includes the National Park.

2.12.2 In total 46% of the proposed Mine site is currently a mix of arable and grazing agricultural land. The remaining 54% is currently broadleaf and coniferous woodland. Earth movements during construction would be likely to have a major adverse impact on the soil due to the sensitivity of the site’s soil to movement. Hence best practice guidance designed to reduce the impacts of earth moving would be followed, and this would reduce the potential impact to a residual minor adverse level.
Within the site there is currently 17ha of commercial plantation and 2ha of natural woodland. Of this, 2.9ha of woodland on site is designated under Core Policy C of the NYMNPA Local Development Framework. During construction, 1.7ha of broadleaf woodland and 11.3 ha of plantation forestry would be removed. The loss of land and forestry during this phase would have a minor adverse impact on the conservation objectives of the park. The design of the Dove’s Nest Farm site has sought to reduce the loss of land as far as possible, and land restoration and landscaping has also been proposed to reduce the overall impact. However, the residual impact would remain minor adverse.

During operation, 55.8 acres of land would be removed from its current use. Of this, 10.7ha would be actively developed with the remainder restored to green areas. Nevertheless the removal of 36ha of land used for agriculture and 17ha of plantation from its current use would result in a moderate adverse impact. YPL has sought to minimise land removal through the design of the site and, hence, only 10.7ha of the site would be industrially developed. In addition, broadleaf trees would be replanted on the site to replace removed woodland. After taking these measures into consideration, the residual impact of this change of use is predicted to be of minor adverse significance. All other operational impacts would not be significant.

Impacts identified during the decommissioning would be similar to those identified during construction, but of a shorter duration and not significant.

**MINERAL TRANSPORT SYSTEM AND INTERMEDIATE SHAFTS**

**3.1 Amenity and Recreation**

**3.1.1** Amenity and recreation receptors within 2km of each of the three MTS intermediate shaft sites were identified through a desk study. Approximately 900km of PRoWs were identified within the study area, with two PRoWs crossing site boundaries at the Lady Cross Plantation and Lockwood Beck sites.

**3.1.2** Overall there is the potential for temporary minor to major adverse visual impacts to recreational users within the line of site of each of the MTS sites (see Landscape and Visual Environment below). Additionally, construction traffic along the A171 has the potential to have visual impacts on recreational users in the area of each of the three sites. These impacts would range between minor adverse and major adverse depending on the specific location.

**3.1.3** During operation there would be negligible to minor visual impacts on recreational users close to the three MTS sites from the permanent presence of operation buildings, however, these would be largely screened by woodland once planted trees mature.

**3.1.4** No other significant impacts to amenity and recreation assets (aside from those discussed above) were identified as a result of activities during construction, operation or decommissioning.

**Lady Cross Plantation**

**3.1.5** Approximately 707m of PRoW 310049 at the Lady Cross Plantation site would be obstructed during the construction works; resulting in minor adverse impact. However the footpath route would be maintained by a diversion and this would reduce the overall impact to a negligible level. During the site’s operation
the original footpath route would be reinstated and improved for cycle and equestrian users; resulting in minor beneficial impacts.

3.1.6 PRoW 310050 crosses an unnamed road (link 45) which runs between the A171 to Egton and this would experience a 111% increase in HGV traffic, causing a moderate adverse impact on pedestrian amenity. Hence it is proposed that the temporary diversion of PRoW 310049 around the site to align with PRoW 310050 would minimise the need to walk along the road. Taking this into consideration, the residual impact would be of negligible significance.

**Lockwood Beck**

3.1.7 No PRoW would be obstructed at the Lockwood Beck site during the construction works. PRoW 126/5/3 divides the construction site, passing along a track that would remain open during construction. Construction traffic crossing this track would be subject to construction site traffic management, resulting in a minor adverse impact. Footpath diversions would be temporarily in place during the construction period while drainage measures are installed; resulting in a residual impact of negligible significance. Noise impacts from construction activity would have a negligible impact on footpath users.

3.1.8 During the operational phase, the obstructed sections of the footpath would be reinstated to a higher standard than present; therefore this would result in a minor beneficial impact.

**Tocketts Lythe**

3.1.9 The Tocketts Mill Caravan Park is immediately adjacent to the proposed development site. However, it is not predicted that there would be significant impact on the Caravan Park or other receptors due to construction activities or associated noise.

3.2 **Noise and Vibration**

3.2.1 The study area for the noise and vibration impact assessment was determined through desk based research, drawing on the traffic and transport assessment and on consultation with NYMNPA.

3.2.2 Impacts identified during the construction phase are outlined for each site below. Potential impacts identified during the operational phase would be negligible. In addition, impacts during decommissioning would be similar to those identified during the construction period, but would occur over a shorter time period.

**Lady Cross Plantation**

3.2.3 The noise assessment predicted that noise from construction activities would raise background noise by no more than 10dB; resulting in a negligible impact. Vibration caused during standard construction activities would result in a very low effect or negligible impact at all sites assessed. Blasting may be required during the shaft construction; however, vibration caused by blasting would be minimal and infrequent, resulting in a negligible impact.
3.2.4 Additional traffic caused by HGVs and workers during the construction period potentially would result in a moderate to major adverse effect on background noise (depending on the location) between 06:00 and 07:00 and 22:00 and 23:00 week days and between 08:00 and 09:00 on Saturday throughout the construction period under both the worst case (January) scenario and the annually averaged scenario. Due to the short duration and temporary nature of these effects, it is considered that the impact would be of negligible significance overall.

**Lockwood Beck**

3.2.5 As with the Lady Cross Plantation site, construction activities are not expected to result in a significant increase in background noise (more than 10dB). However, night time spoil removal and placement during construction phase 5 would be likely to result in a moderate adverse impact at Lockwood Beck Farm. Given this the installation of an acoustic screen, as well as following industry standard guidelines, is proposed and this would reduce the residual impact to a negligible level. Vibration from standard construction activities would have a negligible impact on nearby properties. Vibration caused by blasting could have a moderate to major adverse impact if blasting occurs up to five times per day; if blasting occurs three times per day, during daytime and evenings, the residual impact would be negligible.

3.2.6 Traffic noise caused by additional HGVs and workers during the construction phase would have a moderate or major effect (depending on the location) on noise levels between 06:00 and 07:00 and 22:00 and 23:00 seven days a week, with an additional period between 08:00 and 09:00 on Saturday during the worst case traffic scenario (January). When averaged over the year the impacts would the same but without the additional Saturday period. However, due to the short duration and temporary nature of the impact it is considered that the overall impact would be of negligible significance.

**Tocketts Lythe**

3.2.7 Cumulative noise generated by temporary shaft ventilation, generators and night time spoil removal and placement would have a moderate adverse impact on Plantation Farm during construction phases 3, 4 and 5. However, the addition of an acoustic fence and following of industry standard guidelines during the construction phase would reduce the impact to a negligible level.

3.2.8 Vibration caused by standard construction activities are predicted to result in a negligible impact; however, it has been identified that blasting would have a moderate to major adverse impact on Plantation Farm. Particular attention would be paid to compliance monitoring to minimise the blast noise and vibration as far as possible. Vibration caused by blasting could have a moderate to major adverse impact if blasting occurs up to five times per day; if blasting occurs three times per day, during daytime and evenings, the residual impact would be negligible.

3.2.9 Traffic noise caused by additional HGVs and workers during the construction phase would have a moderate or major effects (depending on the location) on noise levels between 06:00 and 07:00 and 22:00 and 23:00 seven days a week, with an additional period between 19:00 and 20:00 on Saturday during the worst case traffic scenario (January). When averaged annually, there would still be a moderate or major impact on noise between 06:00 and 07:00 and 22:00 and 23:00 every day except Saturday, which would only experience significant impacts during the 06:00 to 07:00 period. This
reflects the fact that background noise during these periods is generally lower. However, because the impact would be short in duration and temporary, it is therefore predicted that the impact would be of negligible significance.

3.3 Air Quality

3.3.1 Impacts on air quality as a result of the three MTS intermediate shaft sites have been determined by identifying receptors in the area of each shaft site and assessing the likelihood of an impact arising due to particulate matter, traffic exhausts and emissions from onsite machinery. These sources of air pollution vary in nature and so individual study areas were used to determine impacts from each source.

3.3.2 The level of emissions predicted from each of the sites due to construction plant and machinery are expected to cause a negligible to minor impact in terms of human health. In terms of ecology, in some areas along the A171 increased fumes from traffic would be expected to result in levels of nitrous oxide above the ecosystem focused air quality objective (of 30µg.m⁻³). However, this would only be the case during the construction phase and so would represent a temporary, minor adverse impact.

3.3.3 During operation, emissions generated by onsite generators would result in a negligible impact at all sites in terms of human and ecological health. Impacts during the decommissioning phase would be similar to those during construction but would occur over a shorter time.

Lady Cross Plantation

3.3.4 Dust and airborne particles which are created during site preparation, earth works and construction would have the potential to adversely affect air quality at the nearby Ladycross Caravan Park, Plantation Farm and Waterfall Farm. However, due to the low sensitivity of the area around Lady Cross Plantation and given that industry best practice would be followed (e.g. screening the site and dampening soil), the residual level of impact is predicted to be negligible.

Lockwood Beck

3.3.5 There are several properties and designated sites near to the Lockwood Beck site that potentially would be impacted by air quality change due to increased levels of dust and airborne particles which may be caused by construction works and earth movement on site. These include Kateridden; Landscape View; Pinewood; Plum Tree Farm, Lockwood Beck Farm and the North York Moors SSSI, SPA and SAC.

3.3.6 In order to reduce these potential effects, screens and bunds designed to reduce the spread of dust would be installed and construction best practice guidelines followed, and measures would be taken to reduce emissions from onsite generators. Taking this into account, it is expected that the residual impact would be minor adverse with regard to the properties near the site and negligible with regard to the surrounding land.
Tocketts Lythe

3.3.7 As with the other sites, earth moving and general construction activities would have the potential to create dust, potentially reducing air quality at the nearby Plantation Farm and Waterfall Farm. The construction of screens and bunds would help to prevent the spread of dust and following construction best practice (designed to reduce dust levels) would result in a residual impact of minor adverse significance at the two farms and negligible significance on the surrounding land.

3.4 Socio-economics

3.4.1 A desk study was undertaken that looked at the socio-economic costs and benefits of the MTS and intermediate shafts, the assessment focused on a range of geographical and economic scales ranging from local to national. Where the assessment looked at job creation, this was based on the assumption that 60 minutes was a commutable distance to the MTS sites.

3.4.2 The construction of the MTS and MTS access sites would generate employment opportunities. Although local recruitment probably would be limited due to the specialist nature of the work, it is assumed that some employees would need to travel in from the wider area and stay in local temporary accommodation. The creation of additional jobs would have a temporary minor beneficial impact on unemployment. There would also be a temporary minor beneficial impact on income and indirect jobs from the supply of short term accommodation within a 60 minute commutable distance of the shaft sites.

3.4.3 YPL would invest £292.6 in the construction of the MTS (for 6.5Mtpa) and is committed to using local suppliers where possible increasing opportunities in the local supply chain. The investment would be expected to create 119 indirect jobs and provide economic benefits to local companies supplying the MTS construction sites and workers. Increased local spending would be likely to have a temporary minor beneficial impact on job and wealth creation, continuing as a permanent major beneficial impact at the local level during the operational phase.

3.4.4 The investment of £262.6 would increase the Gross Value Added (GVA, a measurement of wealth) of the area in such a way as to cause a major beneficial impact at a district level and a moderate beneficial impact at LEP level.

3.4.5 The loss of direct and indirect employment at the end of operation and following completion of decommissioning would have an adverse impact on jobs, however, this should be set against the benefits.

3.5 Ecology

3.5.1 A desk study of each MTS access site plus 2km around each site was undertaken to identify any impacts on ecological features. For designated sites a 10km area was searched. Field surveys were also undertaken; initially the development plus a 50m buffer was surveyed, however, a 2km area was then surveyed for badgers; a 5km area for bats; and a 250m area for great crested newts.
3.5.2 The habitats within each of the MTS access sites are considered to be of low ecological value and the loss and disturbance of habitat due to construction is predicted to cause a minor adverse impact. In addition, each site provides poor breeding bird habitat and supports a typical range of species, with no unusual species being found during the surveys. As it is illegal to harm or disturb breeding birds, ground clearance works would be carried out outside of the breeding bird season wherever possible. Where it is not possible, a walk over survey would be undertaken prior to any works and where birds’ nests are found, they would be marked and avoided. Lighting also has the potential to disturb birds and foraging bats. Hence on site lighting would be designed in accordance with appropriate guidance, installed in a sensitive manner and directed to minimise disturbance. With this mitigation in place, the residual construction impact would be minor adverse.

3.5.3 Site preparation works would result in minor adverse residual impacts on common lizards at Lady Cross Plantation and Lockwood Beck. Badgers were not recorded during the survey.

3.5.4 During operation land on the site would be restored and landscaped in an environmentally sensitive manner, reducing the effect of loss of habitat and resulting in a minor beneficial residual impact. As part of the landscaping plan, habitat suitable for nesting birds would be created which would enhance the site and have a long term minor beneficial impact on birds. Similarly, the landscaping plans would enhance the habitat for reptiles, causing a long term minor beneficial impact. The proposed landscaping strategy would also provide additional habitat for bats and, with a sensitive site lighting strategy, it is predicted that there would be a long term minor beneficial impact.

3.5.5 For the decommissioning phase, each intermediate shaft site would be well established as a part of the local landscape, contributing to biodiversity value and reinforcing the character of the wider area.

3.6 Landscape and Visual Environment

3.6.1 A landscape and visual impact assessment was undertaken based on identified vantage points within sight each of the MTS access site.

**Lady Cross Plantation**

3.6.2 The construction of the site would require the installation of a 45m high temporary winding tower and a 30m high temporary generator stack, the use of mobile cranes up to 76m as well as the construction of onsite facilities and access road.

3.6.3 The height of the winding tower, generator stacks and cranes would cause temporary and reversible impacts and would have significant adverse visual impacts on users of local PRoWs, sections of local roads and local lanes used by recreational users, a limited number of residential properties and some plots at the Ladycross Caravan Park. The tall structures would also result in temporary, reversible minor adverse impacts on users of wider recreational areas, including the upper northern and southern areas of the Esk Valley and public areas around properties at Grosmont.

3.6.4 Permeant impacts on the physical landscape could arise through changes in land use in the northern part of the site, as well as temporary changes in the southern part of site. After construction, the site would be landscaped and restored where possible; with the exception of the shaft access building that
would remain in place throughout operation. Medium to long term reversible impacts would arise through the removal of small areas of the existing woodland, which would result in a minor adverse physical impact on the North York Moors National Park Landscape Character Area (Central Valley (8b) Lower Esk Valley). Permanent landscape effects would also be caused by the replacement of existing agricultural land with species rich grassland, woodland edge planting and creation of the operational shaft and associated buildings.

3.6.5 At the ground level, the site would be well screened by existing dense woodland and most construction activities would not be seen. However the tall infrastructure would be visible from more distant moorland areas to the south and west, which would have a temporary, reversible minor adverse impact.

3.6.6 The loss of woodland during construction on the site would have temporary minor adverse impacts on the National Park’s special qualities. A significant adverse impact would occur with respect to views from adjoining areas of moorland, local archaeological features and local PRoWs. There would also be a minor adverse impact with regard to maintaining of dark skies and night time tranquillity due to construction phase lighting and increased traffic.

3.6.7 Effective screening of the operational site by trees and shrubs would result in minor impacts. The construction phase shaft building would be replaced by a smaller, single storey building which would be screened by trees. Initially, minor adverse impacts to users of the PRoW that crosses the site would occur, however, these would reduce as planted habitat matures, leaving a residual impact of minor beneficial significance on the landscape.

3.6.8 Impacts during decommissioning would largely be short term and minor adverse in nature. Physical works would largely be screened by existing woodland, with the main impact being caused by the temporary use of high cranes.

**Lockwood Beck**

3.6.9 As with the construction of the Lady Cross Plantation, the construction phase of the Lockwood Beck site would require a temporary 45m high winding tower, a 20m generator stack, the construction of associated buildings, an access road and the use of cranes up to 76m high.

3.6.10 There would be significant adverse temporary and reversible impacts to the landscape character during the construction phase due to the visibility of the temporary winding tower, generator building and cranes. This infrastructure would also be visible from parts of the National Park, including parts of the Northern Moors 1c Landscape and parts of the Coast and Coastal Hinterland 4a Landscape.

3.6.11 Significant temporary adverse visual impacts would be caused by onsite construction plant, activities and lighting. These elements would be visible from local PRoWs, including the Quakers Causeway, rural lanes and roads used by recreational users (including those at the Lockwood Beck Reservoir) within 1.5km of the site. A limited number of residential properties at Stanghow Road would be able to see the high construction structures, resulting in a temporary significant adverse visual impact.

3.6.12 Permanent changes to the physical landscape would be caused by the construction and presence of the operational facilities. The removal of 0.5ha of existing woodland and 450m of hedgerows would
result in medium to long term reversible physical impacts on the landscape character. When combined, these changes would result in a minor adverse physical impact on the Redcar and Cleveland Character Area (P2) Moorland Fringe Farmland.

3.6.13 Permanent, small scale loss of farmland and the conversion of 6.7ha of agricultural land to broadleaf forest, within the P2 Cleveland Character Area, would also have a minor adverse impact on the landscape character.

3.6.14 Other landscape and visual (beneficial) impacts during the operational and decommissioning phases would be similar to those described for Lady Cross Plantation.

**Tocketts Lythe**

3.6.15 Construction activities at Tocketts Lythe would be the same as for the Lockwood Beck. Removal of small areas of woodland and hedgerow would cause a medium to long term reversible physical impact, resulting in a minor adverse impact on landscape character (Redcar and Cleveland G5).

3.6.16 The presence of the high structures and site activity at ground level would be visible from: the Cleveland Way; Cleveland Street Walk and routes used by recreational users, including rural lanes north and north east of Guisborough, resulting in temporary, reversible, minor to moderate visual impacts to the users of these routes. There would also be significant adverse impacts on residential properties within 1km of the site, predicted as a result of the presence of construction activities.

3.6.17 Temporary and reversible significant impacts would occur on the landscape character due to the visibility of the winding tower, generator stack, cranes and ground level construction activity. In particular this would impact areas of the Guisborough Lowland Landscape Tract and small areas of the Cleveland Foothills within the North York Moors Landscape Character Area. The replacement of farmland and broadleaf forest and the creation of permanent operation buildings would also have permanent minor adverse changes on the Redcar and Cleveland G5 landscape character area.

3.6.18 Landscape and visual (beneficial) impacts during the operational and decommissioning phases would be similar to those described for Lady Cross Plantation.

**Cultural Heritage**

3.7 A desk study, focusing on the area within 2km of the intermediate shaft sites, and field investigations (site visits and LiDAR survey) were undertaken to determine the presence of cultural heritage receptors near the three sites.

3.7.1 Lady Cross Plantation site is in an area known to have had prehistoric activity but mainly comprising of post-medieval industrial activity. No important finds have been made within the Lady Cross Plantation site; however, two Scheduled Monuments (SMs, prehistoric barrows) were identified during the desk study, both approximately 500m east of the proposed site at Horse Mire Head Farm. It is predicted that disruption due to the proximity and appearance of the winding tower would have a
temporary minor adverse impact on the two SMs due to the effect on visitors. There would be no disturbance during the operational phase.

3.7.3 It is considered that there would be no other significant impacts during construction, operation or decommissioning.

**Lockwood Beck**

3.7.4 Archaeological finds at the proposed Lockwood Beck site have been largely post-medieval and modern industrial. During the desk study no sites of importance were found within the site boundary, however, several SMs (funerary monuments), the Red House Grade II listed building and the Moorsholm Conservation Area were found within the study area. It is predicted that there would be a temporary minor adverse impact on visitors to these sites due to the proximity and presence of the winding tower during the construction period. Several other sites of archaeological interest were identified within the zone of theoretical visibility (ZTV), these are: Kateridden medieval settlement, a possible medieval road, medieval field systems, two earthwork mounds and a stone built drain. It was assessed that there would be negligible impacts on these features during construction or operation.

3.7.5 It is considered that there would be no other significant impacts during construction, operation or decommissioning.

**Tocketts Lythe**

3.7.6 Finds recorded at the Tocketts Lythe site were found to be generally post medieval or modern industrial. No designated heritage assets were recorded within the site boundary; however, three sites of archaeological interest were identified within the study area. These are: Waterfall Ironstone Mine, post-medieval agricultural building remains and remnants of a ridge and furrow. Thirteen Grade II listed buildings and two conservation areas were also identified.

3.7.7 It is predicted that there would be minor temporary adverse effects on all designated assets within the study area due to the relative proximity and visibility of the tall structures on site, which would impact on the general historical landscape. This would return to normal conditions during the operational period.

3.7.8 All other impacts identified during the construction and operational phase were determined to be not significant. No significant impacts are predicted to arise during the decommissioning phase.

3.8 Geology and Hydrogeology

All areas where there is potential for impacts to geology and hydrogeology as a result of the MTS access sites were considered as part of the assessment. In addition, a risk assessment was undertaken to identify which water sources were sensitive and most at risk.
3.8.1 **Lady Cross Plantation**

Construction materials used in the construction of the shaft would be permeable. Due to the nature of the groundwater conditions at the Lady Cross site, construction of the shaft is not expected to have a significant impact on groundwater. It would be likely that there would be minor changes in groundwater flow and levels due to water filling the MTS. This would be limited to 36m$^3$/d but would have a minor adverse impact at Topstone Farm and to the Cloughton Aquifer due to the high value of these water sources.

3.8.2 To prevent rain water from getting into the underground aquifers, an onsite water management facility would be installed. As a result, it is predicted that there would be no significant impacts on the Ravenscar Formation aquifer due to construction works.

3.8.3 Chemical pollution from grouting of the substructures, water run-off during construction activities and waste facilities has the potential to cause adverse effects on the chemistry of groundwater. These sources of pollution could have a significant adverse impact at Topstone Farm and the Cloughton Aquifer due to their importance for water supply. However appropriate design and construction mitigation would be implemented; after which, the residual impacts would be minor adverse.

3.8.4 Impacts identified during the construction phase would be likely to continue through the operational period, resulting in residual permanent, minor adverse impacts for the Topstone Farm and Cloughton Aquifers. However, no significant impacts are predicted.

3.8.5 **Lockwood Beck**

At Lockwood Beck there would be the potential for changes to groundwater levels and flow during the construction of the waste management facility. These changes could prevent water flowing back in to the aquifers and replenishing them. In addition, surface water from streams and rain may infiltrate the groundwater and reduce its quality. Minor adverse impacts have been predicted at three unnamed discharges, Kateridden Beck, Dale Beck and groundwater in superficial deposits, Scalby Aquifer, Scarborough Aquifer, Saltwick Aquifer and Cloughton Aquifer.

3.8.6 The risk assessment undertaken with respect to water sources around Lockwood Beck demonstrated that it is not likely that significant impacts would arise due to chemical inputs.

3.8.7 Impacts identified during the construction phase are likely to continue through the operational period, resulting in insignificant impacts at the locations listed above.

3.8.8 **Tocketts Lythe**

During the risk assessment undertaken for this site, it was determined that the groundwater sources around Tocketts Lythe were either of low importance or low sensitivity to impact and, therefore, all potential impacts would be of negligible significance or less.

3.8.9 No significant impacts are predicted during the decommissioning phase at any of the sites.
3.9 Hydrogeology and Flood Risk

3.9.1 The assessment of hydrology and flood risk was based on a desk study concentrating on the intermediate shaft sites, but also considering any areas where it was perceived that there is the potential for impacts.

Lady Cross Plantation

3.9.2 A number of tributaries, such as the Cat Scar Beck, Murk Beck Slack and Cold Keld Beck, spring in the region of the Lady Cross Plantation site and drain into the River Esk. The site is in Flood Zone 1 (low), with a less than 1 in 1000 annual probability of flooding. Beneath the site is the Esk and Yorkshire ground water body, which is considered to be of good quality.

3.9.3 During construction, the creation of laydown areas, access roads, areas of hard standing and spoil deposition areas would have the potential to increase surface run-off at the site, increasing the amount of water entering the River Esk and causing changes to the river. Measures to minimise run-off have been included in the site design and it is predicted that, as the additional water would be distributed through three tributaries, the increase in water flow would be minimal, resulting in a minor adverse impact. Moreover, after the implementation of the proposed mitigation, the residual impact on the River Esk would be negligible.

3.9.4 During operation no earth works are expected, removing the potential for pollution through surface water contamination and sediment run-off. There would be permanent increases in water flow to the tributaries on site due to the site drainage system, however, this would be expected to result in a negligible adverse impact overall.

3.9.5 Impacts during decommissioning would be expected to be similar to those during the construction phase.

Lockwood Beck

3.9.6 There are seven named designated watercourses near the Lockwood Beck site, the site itself is in the upper catchment of the Hagg Beck, which flows into the Skinninggrove Beck, a designated main river. The site also drains into the Kilton Beck, which is considered to be of good ecological status. The Lockwood Beck site is partially within Flood Zone 3 and potentially affected by river flooding in some areas. The site is above the Tees Mercia Mudstone and Redcar Mudstone ground water body.

3.9.7 Due to the good ecological condition of the Kilton Beck there would be the potential for sediment from earth moving works to enter the river and cause moderate adverse impacts on the ecosystem. Mitigation, such as the use of sediment traps and applying best practice construction techniques, would be used to reduce the potential for sediment to enter the river to a level where the residual impact would not be significant.
3.9.8 Construction of the haul road at Lockwood Beck would require the modification of a section of the Kilton Beck/Lockwood Beck which crosses the site. There would be the potential for these modifications to increase the risk of flooding and expose the river to contamination during construction. However, due to the short-term nature and small footprint of construction activities, it is predicted that the potential for contamination is low. However, flooding could have a minor adverse impact.

3.9.9 Additional surface run-off would be expected due an increased area of hard surface on the site. A drainage system is proposed to channel additional water into the existing watercourses and this would be likely to result in increased water flow in the Kilton Beck. The impact of this is predicted to minor adverse, which would reduce to a negligible level through the implementation of mitigation measures in the construction of the drainage system.

3.9.10 Operational and decommissioning impacts would be expected to be the same as those for Lady Cross Plantation.

_Tocketts Lythe_

3.9.11 There are several tributaries of the Waterfall Beck within the Tocketts Lythe site area. Waterfall Beck flows into the Skelton Beck, which is a designated main river and currently considered to be of poor ecological status. There are areas of Flood Zone 2 and 3 associated with the Skelton Beck and Waterfall Beck, however, the Tocketts Lythe site is on higher ground and within Flood Zone 1.

3.9.12 A site drainage system would be installed to reduce the effects of surface run-off from areas of hard standing. This drainage system would flow through free standing outfalls directly to streams on site. This would increase water flow in these streams which may result in a minor adverse impact on the physical or biological characteristics of the Skelton Beck. However, proposed mitigation would be expected to reduce the impact to a negligible level.

3.9.13 Operational and decommissioning impacts would be expected to be the same as those for Lady Cross Plantation.

3.10 **Land Use and Soils**

3.10.1 A desk study focusing on a study area within 500m of each intermediate shaft site was undertaken to consider the potential impacts on land use and soil condition during the construction, operation and decommissioning phases of the MTS.

_Lady Cross Plantation_

3.10.2 In total 25.7ha of land would be disturbed due to construction works, 25.2ha of this is agricultural land (98% of which would be rough grass or heather) and 0.5ha is coniferous or mixed woodland. Due to the relative importance of the National Park and agricultural land, the impact from the loss of this land would be moderate adverse. The design of the project has taken this into consideration and reduced the loss of land where possible.
3.10.3 The operational phase site footprint would be considerably smaller than during the construction phase, with only a 0.25ha permanent working area proposed around each shaft, and 0.15ha for an access road.

3.10.4 As mitigation for the loss of this land, restoration involving 4.1ha of woodland edge planting, 16.4ha of species rich grassland creation, 0.7ha of wetland and 2.6ha of common lizard and wet heath habitat is proposed. Taking this into consideration, the residual impact is predicted to be minor adverse once these habitats become established.

3.10.5 The soil type at Lady Cross Plantation was identified through field sampling as fine textured with impeded drainage. Although of limited quality for agricultural use, this soil would be sensitive to becoming degraded during site preparation and earth works and would become limited in its usefulness as topsoil. As such, a major adverse impact on the soil could occur during earth moving phase. However, best practice techniques are available to minimise impacts from soil handling and these would be followed, minimising the potential for soil damage and reducing the residual impact to minor adverse.

3.10.6 The requirement for extensive ground works would also be likely to cause disruption to existing drainage channels on site. As a result, it is likely that soils on the site would be subjected to a moderate impact on quality. However, the implementation of mitigation designed to reduce the impact on drainage channels would reduce the impact on soil, resulting in a residual impact of minor adverse significance.

3.10.7 It is considered that remaining impacts identified during the operational period would be not significant. Impacts during decommissioning would be expected to be similar to those during construction, but would be of a lesser extent and shorter in duration (i.e. not significant).

**Lockwood Beck**

3.10.8 At Lockwood Beck, 35.5ha of land would be disturbed during construction, nearly all of which would be agricultural land (comprising 53% arable land and 44% neutral grassland). Approximately 0.3ha of the proposed site is woodland. Due to the loss of habitat and reasonable quality agricultural land, this loss of land is predicted to result in a moderate adverse effect.

3.10.9 The footprint required for the operational phase would be less than the construction phase, with a 0.25ha working area required around the shaft and 0.21 ha for the access road. Restoration and the creation of 6.7ha of broadleaf woodland, 18.3ha of agricultural grassland, 6.9ha of species rich grassland, 0.63ha of wetland habitat and 400m of native species hedgerow is proposed. Hence a minor adverse residual impact is predicted in this phase.

3.10.10 During the soil survey at Lockwood Beck it was found that it is generally heavy with impeded drainage. The soil quality was judged to have a high potential to be degraded during soil moving works, resulting in major adverse impact prior to mitigation. Following standard best practice on soil handling during construction would reduce the impact to a minor adverse level.
3.10.11 Due to the amount of soil handling works required and alterations to existing drainage systems, it is likely that there would be a moderate adverse impact on soil quality at the site. This impact would reduce to a minor adverse level after the implementation of best practice soil handling techniques.

3.10.12 Remaining impacts identified during the operational period were all considered not to be significant. Decommissioning impacts would be expected to be similar to those during construction but to a lesser extent.

_Tocketts Lythe_

3.10.13 At Tocketts Lythe, 18.9ha of a total of 20.3ha of land that would be lost is agricultural, with 98% of that being arable land. The loss of agriculture land during the construction period would result in a moderate adverse impact. During the operational phase the total footprint would be reduced with a 0.25ha working area required around the MTS shaft and a 0.1ha required for the access road. However, the proposed restoration of 2.5ha of broadleaf native species scrub, 0.4 ha of wetland (ponds) and 750 linear meters of native species hedgerows would reduce the residual impact to a minor adverse level.

3.10.14 The soil type at Tocketts Lythe was found to be heavy with impeded drainage and assessed as being sensitive to degradation during construction earth moving works. Therefore, proposed construction activities would result in a major adverse impact on soil quality, without mitigation. However, soil handling mitigation would mean that the impact would reduce to minor adverse level.

3.10.15 As with Lockwood Beck, there is likely to be a moderate adverse impact to existing land drainage channels. However, this would reduce to minor adverse after the implementation of an appropriate drainage system.

3.10.16 Remaining impacts identified during the operational and decommissioning phases were all predicted not to be significant.

4 NATIONAL PARK SPECIAL QUALITIES

4.1.1 Special qualities are the mechanism through which the UK’s National Parks are awarded legal protection. They relate only to National Parks and are specific to each individual National Park. This section summaries the predicted impact of the Mine and MTS (which are predicted to have the potential to have an influence on the North York Moors National Park) on the special qualities of the National Park (as set out in the Park’s Management Plan). **Table 1** below details the individual special qualities of the Park and the impact that the YPP is predicted to have on that special quality.
### Table 1  Impacts of the YPP on the North York Moors National Park Special Qualities

<table>
<thead>
<tr>
<th>Special quality</th>
<th>Residual Impact (Realistic Worst Case Scenario)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SQ1: Great diversity of landscape</strong>; sudden dramatic contrasts associated with this.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ2: Wide sweeps of open heather moorland</strong>; distinctive dales, valley and inland headlands.</td>
<td>Construction: Minor to Major adverse</td>
</tr>
<tr>
<td><strong>SQ3: An abundance of forest and woodland</strong>; ancient trees and woodland rich in wildlife.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ4: Special landforms from the Ice Age</strong>; exceptional coastal geology.</td>
<td>Construction: No impact</td>
</tr>
<tr>
<td><strong>SQ5: Majestic coastal cliffs and sheltered harbours</strong>; distinctive coastal headlands.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ6: A special mix of upland, lowland and coastal habitats</strong>; a wide variety of wildlife dependent on these.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ7: Settlements which reflect their agricultural, fishing or mining past</strong>; locally distinctive buildings and building materials.</td>
<td>Construction: Negligible</td>
</tr>
<tr>
<td><strong>SQ8: Long imprint of human activity</strong>; a wealth of archaeology from prehistory to the 20th Century.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ9: A rich and diverse countryside for recreation</strong>; an extensive network of public paths and tracks.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ10: Strong religious past and present</strong>; ruined abbeys and ancient churches.</td>
<td>Construction: No impact</td>
</tr>
<tr>
<td><strong>SQ11: Strong feeling of remoteness</strong>; a place for spiritual refreshment.</td>
<td>Construction: Minor adverse</td>
</tr>
<tr>
<td><strong>SQ12: Tranquillity</strong>; dark skies at night and clear unpolluted air.</td>
<td>Construction: Moderate adverse</td>
</tr>
<tr>
<td><strong>SQ13: Distinctive skills, dialects, songs and customs</strong>; strong sense of community and friendly people.</td>
<td>Construction: No impact</td>
</tr>
<tr>
<td><strong>SQ14: A place of artistic, scientific and literary inspiration</strong>; a heritage of authors, artists, scientists and explorers.</td>
<td>Construction: Moderate adverse</td>
</tr>
</tbody>
</table>

#### 4.1.2 Impacts on all special qualities during the project’s decommissioning would be minor adverse.
5 MINERAL HANDLING FACILITY AND MTS PORTAL

5.1 Introduction

5.1.1 Due to the location of the MHF site in Wilton, the following topics were scoped out of the assessment and therefore not considered within the EIA:

- Amenity and Recreation.
- Land Use and Soils.

5.2 Noise and Vibration

5.2.1 The study area used for assessing the impacts associated with noise and vibration was determined through the use of desk study, professional judgement and satellite photography and was agreed with RCBC. The study area comprised the area immediately adjacent to the development sites, the closest residential areas, closest office areas and areas possibly affected by changes in traffic.

5.2.2 The noise assessment determined that all receptors considered would experience a negligible impact from construction noise, regardless of the activity being undertaken. Similarly, all receptors sampled would experience a negligible impact from vibration during construction. There would also be a negligible increase in road traffic noise from increased traffic during the construction period.

5.2.3 During the operational period the noise created by operational works is predicted to have in a negligible impact on receptors. Similarly, due to reduced volumes of additional traffic during the operational period, it is predicted that there would only be a 3.4% (approximate) increase in noise conditions, representing a negligible impact.

5.2.4 The impacts associated with decommissioning of the MHF and MTS Portal would be subject to an overall Decommissioning Plan and would be negligible.

5.3 Air Quality

5.3.1 In order to assess impacts on air quality from the MTS Portal and MHF several different study areas were used. That is, for dust and airborne particles; road traffic emissions; emissions from the construction of the MTS Portal; and dryer stack emissions during operation.

5.3.2 Excavations and works on site during the construction period could release dust and particles into the air. It is likely that a high amount of dust would be generated by the excavation works; however, the implementation of standard good practice mitigation, such as soil dampening, would vastly reduce the amount of dust created. Overall the impact of dust emission would be expected to result in a negligible to minor adverse impact on air quality in the short term.
In total, 34 locations were assessed for changes in air quality due to increased traffic during construction. Small increases in air pollution are likely to occur at 18 of the sites tested, with the remaining sites likely to experience an imperceptible increase. This would represent a negligible impact on local air quality. The use of machinery and associated activities required during the MTS Portal construction would be expected to result in a negligible (or less) impact on air quality both in terms of human and ecological health.

Traffic during the operational period would be expected to be from workers travelling to the MHF. The increase in traffic would be likely to cause an imperceptible rise in air pollution during the operational period.

Emissions generated by the drying stack during the operational period are expected to remain low and be below appropriate air quality objectives for both human health and ecology receptors. The potential exists for an above 1% rise in nitrogen concentration (Critical Load Value) with respect to Little Terns and Sandwich Terns; but there would be a below 1% concentration rise in Critical Load for all other species.

Air quality impacts during decommissioning are expected to be similar to those of the construction period, however, shorter in duration.

5.4 Socio-economics

A study area consisting of several levels of economic scale from local scale to national scale was used for the assessment of socio-economic impacts of the MHF.

The construction phase of the MTS Portal and MHF would generate construction employment. During the 36 month construction period in phase 1 (up to 6.5 Mpta), 154 employees per month would be employed. During the phase 2 construction period (up to 13.5Mpta), the number of employees would be 111. This level of employment would have a temporary minor beneficial effect at a TTWA (Travel to Work Area) level. The TTWA covers three TTW zones, which include Scarborough, Rydale, Redcar and Cleveland, Middlesbrough and Stockton-on-Tees.

It is estimated that 66% of construction employees at the MHF facility and 74% of workers at the MTS Portal would require local temporary accommodation. This equates to a 0.4% rise in demand for beds and would represent a temporary minor beneficial impact on a TTWA scale.

YPL would invest £530m on the construction of the MTS Portal and MHF facility. YPL is also committed to using local suppliers wherever possible. The money spent within the supply chain is estimated to result in 260 indirect jobs within the LEP area. The investment and job creation would also be anticipated to result in a temporary, short term, minor beneficial impact to the economy at an LEP level. The increase in GVA that would arise from the expenditure would be predicted to result in a moderate beneficial impact at a LEP level and a minor beneficial to negligible impact at a UK level.

During the operational phase, continued use of local suppliers would result in a permanent, major beneficial impact at a LEP level. During this phase, it is expected that the workforce would be drawn from the surround TTWA and that this would create jobs within the TTWA, which currently has 19,470...
recorded unemployed workers. As the project would create jobs and help meet Government employment targets, the project is predicted to have a major beneficial impact at a Redcar and Cleveland District Level, a moderate beneficial effect in the TTWA and a minor beneficial effect at a LEP level.

5.4.6 None of the permanent jobs at the MHF would require mining specific experience, making them accessible to a large proportion of the unemployed workforce. YPL would hope to recruit 80% of workers without previous industry experience therefore increasing local skills. This would have no adverse effects on the labour workforce and provide a permanent moderate beneficial impact from additional jobs at a RCDC level and a permanent minor beneficial impact at a TTWA level.

5.4.7 Loss of direct and indirect employment at end of operation and following completion of decommissioning would be inevitable.

5.5 Ecology

5.5.1 The assessment of ecology in the area of the MTS Portal and MHF was completed through a desk study of the site and the area that could experience changes, and also through site specific field surveys within the site boundary and a 50m buffer zone. In addition a 2km zone was surveyed for badger and a 500m buffer zone for great crested newt.

5.5.2 Although habitats in the vicinity of site are considered to be common, there are areas of conservation value present, namely areas of grassland, broadleaf woodland and areas of standing open water. The construction of the MHF would affect an area of 28.1ha. As part of the works, landscaping and the creation of 14.3ha of habitat, including wildflower grassland, tree planting and ponds would form part of the mitigation for land lost. Taking this into account the residual impact on ecology resulting from loss of habitat would be a minor adverse impact. The creation of 14.3ha of alternative habitat would, when matured, result in a minor beneficial impact on habitat during the operational period.

5.5.3 The proposed site is considered to be of poor bird habitat and surveys have only recorded common species. Removal of suitable nesting and feeding habitat (approx. 27.9ha) would be necessary. However, ground clearance works would be undertaken outside of the breeding season where ever possible. If this is not possible, standard protective measures would be followed to prevent damage or harm to nesting birds. The area surrounding the site provides similar habitat and, through the creation of alternative habitat (see below), the residual impact would be expected to be negligible. Disturbance caused by noise and vibration would also have a negligible impact. In total, 12.5ha of woodland and grassland would be planted. Once these areas have matured there would be a minor beneficial impact to breeding and feeding birds during the operational period.

5.5.4 Common reptiles were not recorded during site surveys; however, there are areas of suitable habitat which would be treated with care during construction. Hence the residual impact would negligible. As part of the landscaping scheme, land suitable for reptiles would be created and this would have a minor beneficial impact during operation.

5.5.5 Impacts during the decommissioning phase are expected to be similar to those during construction; however, created habitat would be left undisturbed.
5.6  Landscape and Visual Environment

5.6.1  For the landscape and visual impact assessment, a study area of 3km was used with all potential receptors within that area considered. The proposed development is in a relatively flat landscape contained by adjoining industrial areas, built up urban areas and tree cover.

5.6.2  The current landscape is described as being an industrialised estuary landscape character area. The addition of the MTS Portal and MHF would have a minor adverse physical impact on the landscape during the construction phase. The construction phase would also result in either a minor or negligible impact or no change to receptors in terms of landscape character.

5.6.3  The assessment identified that there would be a minor adverse visual impact on residents at Redcar but no change would be experienced by residential settlements elsewhere, with the exception of residents of Wilton Avenue and Hobson Avenue in Dormanstown, who would experience a moderate adverse impact during the construction period.

5.6.4  There would also be a moderate adverse visual impact to users of bridleways 116/10/1 and 116/10/2 and public open space off Hobson Avenue and Wilton Avenue; and minor adverse impacts to users of National Cycle Route 1, the Teeside Way (at Lord McGowan Bridge) and footpaths 105/187/1, 106/189/1, 106/190/1 and 109/187/1.

5.6.5  It is predicted that road users of the A1085 and West Coatham Lane would experience a minor adverse visual impact, as would passengers on the Middlesbrough to Redcar railway. These impacts would last throughout the construction and operation periods. Office workers within the Wilton International Complex would experience between negligible and minor adverse impacts depending on their view.

5.6.6  The viewers of the Eston Nab panoramic viewpoint would also experience a minor adverse impact during both the construction and operational period.

5.6.7  During operation, a minor adverse impact on the physical landscape would be expected, with minor adverse impacts on the landscape character predicted at the escarpment at Eston Hill. There would also be moderate adverse visual impacts during the operational phase in open areas (unfenced/low fenced gardens) at Hobson Avenue in Year 1; this would reduce to a minor to moderate adverse by Year 15. Similarly recreational users of public open ground around Hobson Avenue would experience a moderate to major adverse visual impact at year 1, which would reduce to a minor to moderate adverse impact by Year 15.

5.6.8  During decommissioning, minor to moderate adverse visual impacts are predicted on residents at Wilton Avenue and users of the Teesdale Way (at Lord McGowan Bridge). Minor visual impacts are also predicted to be experienced by users of bridleways 116/10/1 and 116/187/2, footpaths 105/187/1, 106/189/1, 106/190/1 and 109/187/2, the A1085 and users of West Coatham Lane.
5.7 Cultural Heritage

5.7.1 There are no designated heritage assets within the Wilton development site itself, however there are a small number of designated assets to the north-east, with the closest being 500m from the site boundary. Land use around the development site comprises of medieval agricultural and industrial use and modern industrial use. It is likely that land at the development site itself was agricultural until relatively recently.

5.7.2 The site is currently dominated by modern industrial use and the only asset (undesignated) known within the development site is a section of a 19th century Mill Race, which is presently a drainage channel.

5.7.3 The section of the Mill Race within the site would be removed due to the works, leaving the north and south sections intact. Due to the local importance of the Mill Race the assessment determined that this would have a negligible to minor adverse impact and would not constitute harm. Despite this, it is proposed that an archaeological watching brief would be in place to ensure no unforeseen archaeology is damaged during the works.

5.7.4 The EIA determined that the MTS Portal and MHF site, due to the lack of historical features other than the Mill Race, is of no particular historical importance. As such the development would have no significant impact on the historical landscape of the site.

5.8 Geology and Hydrogeology

5.8.1 A study to determine geological and hydrological impacts that could arise through the construction of the MTS Portal and MHF was undertaken which looked at the development site and the surrounding 1km area, in particular focusing on the area within 250m of the site boundary.

5.8.2 The proposed site is currently classed as in industrial use with several sources of contamination identified within the development footprint or wider study area. These contaminants range from radioactive materials to waste management output.

5.8.3 The MTS Portal would be excavated through surface soils and into the underlying rock (Redcar Mudstone). During this works there may be the need for groundwater pumping, potentially resulting in a significant lowering of groundwater levels and flow. Pre-grouting of the rock and the incorporation of a diaphragm to prevent water contamination would result in a residual minor adverse impact. Other physical impacts which may result in changes to groundwater conditions are predicted to have a negligible impact,

5.8.4 In terms of impacts caused by chemical effects, all potential impacts to the site itself are predicted to be of negligible significance. Site workers coming into contact with contaminated soils or groundwater on site could be impacted impact, but through the use of appropriate PPE the residual impact would be of minor adverse significance.

5.8.5 During the operational phase, all identified impacts have been assessed as resulting in a negligible impact, after the implementation of appropriate mitigation.
Impacts identified during the decommissioning phase are likely to be similar to those during construction and negligible.

### Hydrology and Flood Risk

5.9.1 Increased volumes of sediment being washed into the Mill Race and Mains Dyke, which then drains into The Wilton (Tidal Tees) Area water body, during earth moving works could result in a minor adverse impact prior to mitigation. However, after the implementation of soil handling mitigation this would be reduced to a negligible level.

5.9.2 The construction of the MHF and MTS Portal would require changes to the existing Mill Race and Mains Dyke channels, including replacing of 0.6km of the Mill Race with 0.4km of culvert and diversion of the Mains Dyke. This would result in the loss of 0.6km of open channel. Although the works represent a high magnitude of change, due to the low sensitivity of the Wilton (Tidal Tees) Area water body, the impact would be of minor adverse significance.

5.9.3 Accidental release of fuels or other contaminating liquids during construction has the potential to impact the Wilton (Tidal Tees) Area water body, which is classified as being of moderate ecological status. However, the risk of accidental release would be low and the volumes of liquid released would be likely to be well diluted by a large volume of water. Therefore the overall impact is predicted to be negligible after the implementation of mitigation designed to reduce the risk of spill.

5.9.4 During operation it is expected that, although there would be considerable changes to the drainage onsite, a negligible impact on surface water flow would arise. Impacts during decommissioning are expected to be similar to that of the construction phase and would be not significant.

### CUMULATIVE IMPACT ASSESSMENT

6.1 Introduction

6.1.1 A ‘project-wide’ cumulative impact assessment (CIA) was undertaken for the whole YPP in the first instance (inclusive of the Mine, MTS and MHF, as well as the Harbour facility and Construction Village and Park & Ride). Based on this a further ‘wider’ cumulative assessment was undertaken of the YPP with other (i.e. non-YPP) plans and projects.

6.2 Socio-economics

6.2.1 With regard to potential socio-economic impacts, a beneficial impact during the construction phase (of up to moderate beneficial significance) is predicted due to employment opportunities across the YPP. A minor beneficial impact is predicted on accommodation supply (i.e. increased business). Increased expenditure during the construction phase by YPL would result in economic benefits for the supply chain of major beneficial significance and beneficial effects in terms of ‘value added’ to the economy and in terms of tax revenue. Further beneficial impacts in terms of construction and operational phase employment generation are predicted when the YPP in considered with other plans and projects.
During the operational phase, beneficial employment effects are predicted of up to major beneficial significance at the NYMNP and RCBC level.

The socio-economic assessment included an assessment of potential effects on tourism, which assessed the potential for effect on the special qualities of the National Park; damage to these qualities, perceived or otherwise, could affect visitor numbers. This assessment took account of the findings of other areas of the impact assessment, comprising noise and vibration, traffic and transport, the landscape and visual environment, lighting, amenity and recreation, air quality and socio-economics. The outcome of the assessment concluded that the effect on tourism would be no worse than minor adverse during the construction phase and negligible during operation at a National Park level.

**6.3 Noise and Vibration**

The cumulative noise impact assessment for the YPP concluded that, with mitigation, there would be no cumulative impact due to site-based noise and vibration during the construction phase, with a negligible cumulative impact predicted for the construction and operational phase associated with road traffic noise. No significant cumulative impacts are predicted when the YPP is assessed together with the potential impacts of other non-YPP plans and projects.

**6.4 Air Quality**

The cumulative impact assessment for air quality (including dust/fine particulates and the effect of road traffic emissions) concluded there would be no significant impacts on human receptors. Furthermore, with the adoption of best practice, the cumulative dust and fine particulate impact with non-YPP plans and projects is assessed as being insignificant. No significant impacts are predicted on air quality due to cumulative controlled plant and facility emissions.

**6.5 Geology and Hydrogeology**

Potential cumulative impacts on geology and hydrogeology were considered with respect to groundwater quality, levels and flows, including aquifers. This assessment took into account the potential effect of land quality on groundwater and aquifers.

The YPP cumulative impact was assessed as being of negligible significance, with no significant cumulative impacts with non-YPP plans and projects.

**6.6 Land Use and Soils**

The potential cumulative impacts on land use and soils included assessment of the potential for biological contamination, effects of the special qualities of the National Park, effects on existing agricultural land use during the construction phase and, for the operational phase, land taken out of existing use.

YPP cumulative impacts are predicted to be of minor adverse significance (at worst), with the exception of a temporary moderate adverse impact on agricultural land use during construction. A cumulative
impact of negligible significance is predicted. There would be no significant cumulative impact with non-YPP developments.

6.7 Hydrology and Flood Risk

6.7.1 The potential for cumulative impacts on hydrology and flood risk incorporated potential impacts on the supply of fine sediments to watercourses and the potential for changes to existing flood risk. Cumulative impacts were assessed to be of negligible significance for the YPP and no deterioration in the status of water bodies is predicted. This conclusion also applies when the YPP is assessed with non-YPP plans and projects.

6.8 Terrestrial Ecology

6.8.1 With regard to terrestrial ecology, the potential for cumulative impacts included effects on noise levels during construction and operation, air quality effects (nitrogen and acid deposition) and habitat loss. The YPP cumulative impact associated with habitat loss is predicted to be of minor adverse significance, with other construction and operational phase cumulative impacts predicted to be of negligible significance at worst. Cumulative impacts with non-YPP plans and projects are assessed as being of negligible significance.

6.9 Landscape and Visual Environment

6.9.1 The YPP cumulative landscape and visual impact assessment comprised assessment of potential impacts on landscape character, designated landscapes and visual receptors. The assessment included prediction of sequential effects on selected linear visual receptors, which are those effects experienced by a person who experiences one element of the project and then another in sequence when moving through the landscape.

6.9.2 The cumulative landscape and visual impact assessment concluded that the proposed winding towers would not cause project-wide cumulative impacts due to the large distances between the towers and their relative scale within expansive views. However, changes in construction phase traffic and HGV flows would give rise to localised moderate adverse impacts on landscape character along the B1416 corridor. Construction phase traffic is predicted to result in a minor adverse impact along other road corridors, including the A171 and A169. Operational phase traffic flows are not predicted to have an impact on landscape character, with perceptible effects remaining.

6.9.3 The overall construction phase cumulative impact of the YPP on the designated landscapes of the North York Moors National Park and the North Yorkshire and Cleveland Heritage Coast is predicted to be minor adverse.

6.9.4 The duration of winding tower impacts would be up to four years at the Mine site, slightly over two years at the Lady Cross Plantation and Lockwood Beck MTS shaft sites and just under two years at the Tocketts Lythe MTS shaft site. Cumulative, in-combination and in-succession visual and character effects associated with the Mine and MTS towers would last for approximately two years, with the more limited impacts associated with the Mine winding towers alone continuing for a further two years.
Sequential impacts within views from linear receptors would broadly comprise significant adverse impacts for sections of routes that lie relatively close to the project sites and that are within open areas (moorland, for example), and a wider range of less significant impacts for sections of routes that are distant from the sites or pass through complex wooded landscape (the Esk valley for example).

Adverse cumulative landscape and visual impacts are not predicted to arise during the operational phase of the YPP, due to the limited extent of scheme effects, the distance between the operational sites and the lack of intervisibility between the sites. Minor beneficial operational phase cumulative impacts are predicted to occur as a result of the proposed habitat improvements at the Mine and Lady Cross Plantation sites, and proposed native broadleaved woodland planting across the National Park as a carbon offsetting measure.

Cumulative impacts with non-YPP developments would arise (combined distant visibility of YPP features and non-YPP developments creating a wider spread of perceptible development features), but the effect would not be sufficient to alter the existing key characteristics or impact on character that arise from any one YPP element or other development. The YPP / non-YPP cumulative impact is, therefore, considered to be of negligible significance.

Cultural Heritage and Amenity & Recreation

No cumulative impact is predicted on the cultural heritage resource or on amenity and recreation. When considered with non-YPP development, short-term cumulative impacts on the Wainwright Coast to Coast Walk and Teesdale Way National Trail of minor adverse significance are predicted (due to construction).

Marine Environment

With regard to the marine environment, the cumulative impact on marine water quality due to increased suspended sediment concentration arising from capital dredging for other projects (should they coincide with the dredging for the Harbour facility) was assessed as being of minor adverse significance. The effect would be additive, with an overall combined increase in suspended sediment concentration where the sediment plume from more than one projects overlap. However, the cumulative impact on fish populations as a result of this effect is considered to be of negligible significance.

The deposition of sediment onto the seabed during capital dredging has the potential to affect benthic invertebrate communities due to smothering; however, the cumulative impact was predicted to be of negligible significance due to the low magnitude of cumulative impact and temporary nature of the effect.

The cumulative impact on the hydrodynamic and sedimentary regime of the Tees estuary was predicted based on results of modelling studies undertaken for the other projects scoped into the CIA. It is concluded that there would be no cumulative impact on the sediment budget given that the YPP would not change sediment supply to the Tees estuary or result in an overall increase in maintenance dredging requirement within the Tees. Based on this conclusion, no cumulative impact on intertidal areas is predicted (i.e. erosion or accretion) and, therefore, no cumulative impact on intertidal benthic invertebrate communities or habitats available for feeding waterbirds.
6.11.4 The potential cumulative impact on commercial navigation was assessed with respect to potential impact during marine construction works. Mitigation measures would be applied for any marine construction works to manage risk to navigation and it is predicted that the cumulative impact would be of negligible significance. Operational phase cumulative impacts (i.e. implications for vessel traffic management) are predicted to be of negligible significance and all vessel traffic would continue to be effectively managed and controlled by the vessel traffic service (VTS).

6.12 Conclusion

6.12.1 The cumulative impacts that are predicted to arise both from the ‘project-wide’ and ‘wider’ assessments do not represent changes from the levels of significance predicted for those same impacts when assessed individually within the ES.

7 WATER FRAMEWORK DIRECTIVE COMPLIANCE


7.1.2 A detailed assessment was undertaken to determine whether the proposed developments at the Mine, MTS and MHF sites have the potential to impact upon surface waters and groundwater. Each scheme component was divided into separate construction, operational and decommissioning phase activities, and the impact of each activity on surface and groundwater bodies was assessed individually and cumulatively.

7.1.3 The assessment found that the majority of activities at all of the YPP sites would not have a significant impact upon the status of any surface or groundwater bodies, or that any predicted impacts could be mitigated. This means that the majority of YPP activities would be compliant with the requirements of the WFD with one exception. The assessment found that the increase in surface flows and decrease in groundwater flows in Sneaton Thorpe Beck and Little Beck as a result of the development of the Mine at Dove’s Nest Farm has the potential to adversely impact upon water body status by causing geomorphological adjustments and changes to sensitive habitats. Although these are likely to be mitigated by the design of the site drainage system, it is recommended that further monitoring is undertaken to ensure that there no deterioration in water body status occurs.

8 HABITATS REGULATIONS ASSESSMENT

8.1.1 A Habitats Regulations Assessment (HRA), including all elements of the YPP (as for the CIA), has been undertaken to assess the implications of the YPP on designated SACs, SPAs and Ramsar sites. The first stage of the HRA (screening) identified the relevant designated sites that could be affected by the proposals and whether the YPP, either alone or in combination with other plans and projects, would be likely to have a significant effect on the qualifying features of those designated sites.
The screening stage concluded that the YPP had the potential to have a significant effect on a number of designated sites, for the reasons summarised below:

- North York Moors SAC – the Mine with respect to potential nitrogen deposition and groundwater effects and the Lockwood Beck Intermediate Shaft Site with respect to nitrogen deposition.
- North York Moors SPA – the Mine and Lockwood Beck Intermediate Shaft Site with respect to potential disturbance.
- Teesmouth and Cleveland Coast SPA and Ramsar site – the Harbour facility with respect to habitat loss, water quality, disturbance and the potential alteration of coastal processes, and the MHF with respect to disturbance/displacement.

The above designated sites and predicted effects were carried through to the next stage of the HRA, where an assessment was undertaken to assess the potential for effect on the integrity of the designated sites. This assessment drew on the impact assessment undertaken for the YPP and took account of the mitigation measures proposed. This stage of the HRA focuses on the potential for the YPP to affect the ‘structure and functioning’ on the designated sites.

The conclusion of the HRA is that the YPP would not have an adverse effect on the structure or function of the North York Moors SAC, North York Moors SPA or Teesmouth and Cleveland Coast SPA and Ramsar site either alone or in combination with other plan and projects.

**CONCLUSION**

The ES has reported on the diverse range of local, regional and national assets present in the study area and provides details of the assessment of potential impacts resulting from the Mine, MTS and MHF.

The EIA, its finding and the outcomes of the consultation process, have been integral to the iterative design of the YPP. Where possible mitigation has been designed in to the project to prevent or minimise potential adverse impacts. The EIA has also identified the potential for enhancements. In summary, key findings of the EIA include:

- The provision of long-term economic opportunities for the area.
- The employment of up to around 2,500 people on-site during the construction phase of the Mine, MTS and MHF, with around 2,000 indirect jobs per year over the construction period, and 2,200 direct and indirect jobs during the operational phase; with consequent impacts on the local labour market, economy and the provision of public services.
- Increases in traffic and associated increases in noise levels on the local road network as a result of the construction works, with the traffic predominantly comprising workforce movements and HGVs transporting materials to site. A transport strategy, including proposals for highway improvements, that has been developed to manage traffic impacts.
- A significant (but temporary) impact on landscape character and visual receptors during construction. Although the majority of these impacts would decrease with removal of the
construction machinery and landscape restoration post construction, some significant impacts would remain in the local area due to the scale of the completed development.

9.1.3 It has been identified that the development proposals would have a variety of impacts, not all of which are adverse and significant but, for those that are, the EIA process has identified mitigation measures to avoid such impacts where possible. The EIA has also highlighted where, with the right management, the proposals would have positive benefits too, for example in long-term job creation or biodiversity enhancements.

9.1.4 For a full report of the EIA process, its findings and the YPP proposals, please refer to the ES.

9.1.5 Members of the public may inspect copies of the application, the plans, and other documents submitted with it, which include the ES, at:

- North York Moors National Park Authority, The Old Vicarage, Bondgate, Helmsley, York, YO62 5BP
- Redcar & Cleveland Borough Council, Redcar and Cleveland House, Kirkleatham Street, Redcar, TS10 1RT
- Whitby Town Council Offices, Pannett Park, Whitby YO21 3AD
- Scarborough Borough Council Customer First Centre, Town Hall, St Nicholas Street, Scarborough, YO112HG

9.1.6 A copy of the application, and of all plans and other documents submitted with it, has been published on the following websites:

- Redcar & Cleveland Borough Council (www.redcar-cleveland.gov.uk).

9.1.7 Printed copies of the NTS are available free of charge from York Potash Ltd, 7-10 Manor Court, Manor Garth, Scarborough, YO11 3TU.

9.1.8 Printed copies of the ES are available on request from York Potash Ltd at the address above, but please note a charge will be applied to cover production and distribution costs.