Appendix 5: Request for an EIA Scoping Opinion (15 May 2017)

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Date: 15 May 2017
Our ref: 50303/04/HS/AFa/14028908v4
Your ref: NYM/2014/0676/MEIA

Dear Mark

Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as updated) – Request for a Formal Scoping Opinion

North York Moors: Woodsmith Mine (formerly known as Dove's Nest Farm Mine site)

On behalf of our client, Sirius Minerals Plc, we request the North York Moors National Park Authority's ('NYMNPA') formal opinion on the scope of a Supplementary Environmental Statement ('SES') to be submitted in conjunction with an application for minor material amendments to planning permission ref no. NYM/2014/0676/MEIA under Section 73 of the Town and Country Planning Act 1990 ('the s73 application') for the Woodsmith Mine minehead site at Sneatonthorpe. The request is made under Regulation 13 of the Town and Country Planning (EIA) Regulations 2011 (as updated); and is accompanied by the enclosed EIA Scoping Report [15/05/2017].

Due to the nature of the amendments, it is has been agreed with NYMNPA that a further Supplementary Environmental Statement (SES') should be submitted with the s73 application in order to describe the potential for any additional or different environmental effects that have not been previously identified as part of the original EIA process. This request seeks confirmation on the scope of the SES.

To assist NYMNPA in forming their scoping opinion, the enclosed Scoping Report provides the following information:-

1 Site location and description;

2 Description of the nature and purpose of the development;

3 Possible environmental effects and the manner in which these are proposed to be addressed; and

4 The proposed form of the SES.

In considering the content of the SES, we note that the focus of Schedule 4 of the EIA Regulations is the significant effects. Other lesser effects need not be assessed as part of the EIA process. On that basis, and following review of those matters specified within the enclosed report, the scope of additional environmental information to be provided should include consideration of:-

1 Landscape and Visual Impact

2 Geology and Hydrogeology

3 Hydrology and Flood Risk

4 Noise and Vibration

The environmental assessment for each input will be considered during both the construction and operational periods of the development. Direct, indirect, secondary and cumulative effects will also be addressed as relevant.

We seek your confirmation as to the scope of the SES. We trust that the above and the enclosed document provide you with sufficient information to adopt a scoping opinion and we look forward to receiving this as soon as possible within the five weeks allowed by the EIA Regulations.

Please contact me if you require any further information or wish to discuss this further.

Yours faithfully

Hugh Scanlon
Senior Director

Copy Simon Carter, Sirius Minerals Plc

William Woods, Sirius Minerals Plc

Robert Staniland, Sirius Minerals Plc

Janet Horne, Redcar & Cleveland Borough Council

Woodsmith Mine
Environmental Impact Assessment Scoping Report

Information to accompany a request for North York Moors National Park to form a Scoping Opinion

Sirius Minerals Plc

15 May 2017

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Contents

Appendices

Appendix 1: Site Boundary Plan (Ref: YP-P2-CX-550 Rev 1)

Appendix 2: Extent of Woodsmith Mine Site (Ref: 653-AP-0002 Rev 2)

Appendix 3: Plan Identifying the Proposed Amendments to the Approved Development (Ref: YP-P2-CX-560 Rev 4)

1.0 Introduction

1.1 This Environmental Impact Assessment ('EIA') Scoping Report is submitted on behalf of Sirius Minerals Plc which is bringing forward the North Yorkshire Polyhalite Project. Planning permission ref no. NYM/2014/0676/MEIA for the carrying out of mineral working and development associated with the project was issued on 19 October 2015.

1.2 The development to which this EIA Scoping Report relates comprises minor material amendments to the planning permission. The amendments are limited to works taking place at the Woodsmith Mine[1] site (formerly referred to as the Dove's Nest Farm Mine site). Permission for the amendments will be sought via an application submitted under Section 73 of the Town and Country Planning Act 1990 ('the s73 application').

1.3 This document provides information to assist the North York Moors National Park Authority ('NYMNPA') in forming an Environmental Impact Assessment ('EIA') Scoping Opinion under Regulation 13 of the Town and Country Planning (EIA) Regulations 2011 (as updated by the Town and Country Planning (EIA) (Amendment) Regulations 2015) ('the updated EIA Regulations).

1.4 Due to the nature of the amendments, it has been agreed with the NYMNPA that a further Supplementary Environmental Statement ('SES') should be submitted with the s73 application in order to describe the potential for any additional or different environmental effects that have not been previously identified as part of the original EIA process.

1.5 The SES will provide the information specified under Schedule 4 of the 2011 Regulations and will be carried out with regard to best practice as well as current environmental standards and guidelines.

1.6 The findings of the updated EIA will be set out in the SES which will comprise two volumes as follows:-

1 Volume 1 – Updated Non-Technical Summary;

2 Volume 2 – Main Technical Studies, Figures and Appendices.

1.7 This EIA Scoping Report provides information on the proposed changes, the environmental matters requiring consideration and the suggested content of the SES. It is structured as follows:-

- Background information to describe the context of the current changes to the project is provided in Section 2.0;
- Section 3.0 provides a description of the site and surroundings;
- The key elements of the development are described in Section 4.0;
- Section 5.0 contains a review of the potential environmental effects arising from the proposed minor material amendments as a means of identifying those matters to be scoped into the SES; and
- Section 6.0 summarises the proposed form and content of the SES and makes reference to a list of the other documents and material that will accompany the s73 application.

[1] In February 2017, the applicant held a naming ceremony at the site, the outcome of which has been to rename the Minehead site as 'Woodsmith Mine'. Therefore, for the purposes of this Scoping Report and all future documentation, Woodsmith Mine or Minehead refers to the site previously known as Dove's Nest Farm or ('DNF').

2.0 Background

Sirius Minerals Plc

2.1 Sirius Minerals Plc is a listed company on the main market of the London Stock Exchange. The Company is focused on the development of its North Yorkshire Polyhalite Project in the UK and aims to be a world leading producer of multi-nutrient fertilizer. This involves the construction of a new state-of-the-art mine and associated processing and port infrastructure to produce bulk volumes of POLY4 – the trademark name of the Company's polyhalite products.

2.2 Polyhalite is a naturally occurring mineral containing major plant nutrients – potassium, sulphur, magnesium and calcium. It is a valuable multi-nutrient fertiliser and its application by the farming industry, both within the UK and overseas, will assist in maintaining and improving crop yields and harvests.

2.3 The original planning application and this s73 application for the North Yorkshire Polyhalite Project are submitted under the Company's subsidiary trading name of York Potash Ltd.

The Approved Development

2.4 The development approved under application ref: NYM/2014/0676/MEIA comprises the following:-

"The winning and working of polyhalite by underground methods including the construction of a minehead at Dove's Nest Farm involving access, maintenance and ventilation shafts, the landforming of associated spoil, the construction of buildings, access roads, car parking and helicopter landing site, attenuation ponds, landscaping, restoration and aftercare and associated works. In addition, the construction of an underground tunnel between Doves Nest Farm and land at Wilton that links to the mine below ground, comprising 1 no. shaft at Doves Nest Farm, 3 no. intermediate access shaft sites, each with associated landforming of associated spoil, the construction of buildings, access roads and car parking, landscaping, restoration and aftercare, and the construction of a tunnel portal at Wilton comprising buildings, landforming of spoil and associated works at Dove's Nest Farm & Haxby Plantation, Sneatonthorpe (proposed minehead); underneath 252 sq km of the NYMNPA(winning & working of minerals); a corridor extending underground from the edge of the NP boundary to Wilton International Complex(mineral transport system); Lady Cross Plantation near Egton, Lockwood Beck Farm near Moorsholm, Tocketts Lythe, near Guisborough(intermediate shaft sites); site within the eastern limits of the Wilton International Complex, Teesside(tunnel portal)."

2.5 Planning permission was issued on 19 October 2015.

2.6 In December 2016, a non-material amendment to the approved scheme was approved by the NYMNPA (under Section 96A of the Town and Country Planning Act 1990). The approved amendments comprise the following:-

1 Realignment of the main internal access road linking the approved Welfare Building complex and the mine-site; and

2 Minor amendments to the drill pad levels (above Ordnance Datum ('AOD')).

2.7 In May 2016, a further non-material amendment was approved by the NYMNPA (under Section 96A of the Town and Country Planning Act 1990) to allow the temporary use of a) the shaft

entrance without the right-turn lane and b) the farm entrance for a period of 10 weeks, or until the completion of the haul/welfare road, whichever is sooner.

2.8 It is this scheme (i.e. the originally approved scheme incorporating both the s96A non material amendments) as detailed within the York Potash Environmental Statement (September 2014) ('ES September 2014') and Supplementary Environmental Information (February 2015) ('SEI February 2015') that forms the baseline position against which the changes proposed as part of the s73 application will be assessed.

2.9 In addition to the above, information has been submitted pursuant to the requirements of several of the planning conditions attached to planning permission NYM/2014/0676/MEIA, seeking to part discharge various matters of detail associated with site preparation/enabling works. Where these matters have been approved and are relevant to a consideration of the changes included in the s73 application, they are identified in this EIA Scoping Report and will be reported in the SES.

Need for the Amendments to the Approved Scheme

2.10 Following the grant of planning permission, and the appointment of Contractors, more efficient construction techniques and other improvements have been identified that have resulted in the evolution of the scheme at Woodsmith Mine. These include:-

1 The selection of a permanent solution for the winders at the site that can be installed at the outset and remove the need for temporary winders/temporary headframes during the construction period;

2 The redesign of the foreshafts within the Men & Minerals and Minerals Shafts and associated changes to the building layouts to enable access and ventilation to be incorporated, removing the need for the Drift Portal, -45m level road network and the Intake Ventilation Shaft;

3 Revised ground water management removes the need for the grout curtain and the selection of diaphragm walling (D-walling) techniques localises the de-watering required around the Shaft areas to maintain the protection of the Special Area of Conservation (SAC);

4 Reconsideration of the location and layout of the water attenuation within the site that removes the requirement to remove trees near Whinny Wood and the need to re-route a power line; and

5 The installation of a revised drill platform levels, associated ramp accesses and internal road link (partly secured via the s96A consent identified at paragraph 2.6 above) to facilitate movement around the site.

2.11 The above matters give rise to the need for minor material changes to the approved form of development at Woodsmith Mine for which approval will be sought via the s73 application. A detailed consideration of the amendments to the approved scheme is set out in Section 3.0 of this EIA Scoping report.

Consultation in respect of the Amendments to the Development

2.12 The amendments to the development have been the subject of consultation with the NYMNPA, the Environment Agency and Natural England. Feedback from this consultation has informed this proposal at Woodsmith Mine. Discussions will be ongoing as part of the process of preparing the SES that will accompany the s73 application.

3.0 Site Description

3.1 In accordance with the 2011 Regulations, a copy of the approved development site boundary (Ref: YP-P2-CX-550 Rev 1) is attached (Appendix 1); it defines the area of the North Yorkshire Polyhalite Project and is the area to which the s73 application will relate. Notwithstanding this, and as stated earlier in this EIA Scoping Report, the amendments to the development relate solely to the Woodsmith Mine site. To that end, plan Ref: 653-AP-0002 Rev 2 (Appendix 2) defines the extent of the Woodsmith Mine site.

3.2 Woodsmith Mine is located approximately 4km south of the outskirts of Whitby and wholly within the boundary of the North York Moors National Park. The hamlets of Littlebeck and Sneatonthorpe are located approximately 1km to the west and 1km to the north east respectively, from the Woodsmith site.

3.3 The site is bound as follows:

- To the north by areas of farmland;
- To the east by the Haxby Planation woodland; and
- To the south and west by the route of the B1416 (which runs from Whitby to the north to a junction with the A171 Robin Hood's Bay Road approximately 2km to the south east of Woodsmith).

3.4 The site was formerly used for farming and commercial forestry and benefits from mature woodland screening along the south, east and western boundaries.

3.5 The site does not contain any designated heritage assets but the following known / possible non-designated heritage assets of local importance were identified within the original York Potash ES (as updated):-

- An undated enclosure in the north of the mine site;
- A modern enclosure within the north-east of the mine site;
- An undated earthen mound to the west of Whinny Wood;
- Doves Nest Farmhouse, 19th century;
- A post-medieval embanked boundary within the south of Haxby Plantation; and
- An undated earthwork within the west of Haxby Plantation.

3.6 Existing vehicular access to the site is directly from the B1416 to the west and south.

3.7 The highest parts of the site are to the west and south, sloping gently downwards towards the east.

3.8 Pursuant to the pre-commencement planning agreements and conditions attached to planning permission ref no. NYM/2014/0676/MEIA, preparatory works commenced at the site on 1 April 2017. These works included general site clearance and initial excavation around the drill platform; initial drainage works; the erection of the construction compound and haulage route; and erection of part of the perimeter fence. Development officially commenced on site on the 4th May 2017.

4.0 Amendments to the Development

4.1 In summary, the amendments to the approved scheme comprise:-

1 Minehead Layout - Variation to the layout of buildings at the Minehead to include wider diameter Men and Materiral and Minerals foreshafts, incorporating access and ventilation. This replaces the need for the previously approved Drift mine access route, its associated on-site structures and the -45m level road network, as well as reducing the size requirement of the Intake Ventilation Fanhouse building;

2 Construction Methods - Amendments to the construction methods associated with the above including the removal of two of the three 45m high temporary winding towers;

3 Bunding – maintenance of screening bunding to the approved height and layout and amendments to the non-screening bunding to the south of the main platform to accommodate the revised road layout and the potential for reduced spoil quantities.

4 Water Attenuation - relocation of water attenuation ponds into the northern field, amendment of layout and addition of a Silt trap within the southern field (also to be considered as part of submissions to discharge Phase 2 and 3 planning conditions);

5 Drill Pad Extension - an extension to the southern extent of the drill pad with a reduction in its width and the creation of access ramps; and

6 Internal Access Road - the addition of an access road at ground level linking the approved Welfare Entrance to the drill pad location (Minehead).

4.2 Appendix 3 to this EIA Scoping Report includes a plan of the approved and proposed amendments identifying the key aspects of the amendments as summarised above (ref: YP-P2-CX-560 Rev 4).

4.3 Further detail on each amendment is considered below.

Amendment 1 - Minehead Layout

4.4 The s73 application will seek permission for the relocation, reorientation and amendment in size of the approved buildings at the Woodsmith mine site. The approved scheme includes a total floorspace of 12,276sq.m and the s73 scheme, a floorspace of12,967sq.m, representing an overall increase of less than 6%. The changes, as set out in Table 4.1 below can be described as follows:-

1 the Men and Materials Shaft Winder building will be re-orientated and amended in shape to match the foreshaft requirements, removing the need for the 45m temporary headframe, reducing the building size;

2 the Mineral Shaft Winder building will be re-orientated and will increase in size to accommodate the redesigned foreshaft and selected permanent winders which require more space than the previously scoped Koepe winders, removing the need for the 45m temporary headframe;

3 the Intake Ventilation Fanhouse building will be relocated closer to the Men and Materials Shaft Winder Building (to reduce power draw from the ventilation fans) and reduced in size, with Ventilation provided through the Men and Materials shaft;

4 the MTS Shaft Building is increased in size to house an emergency winder; and

5 the Backup Generator building will be reduced in size.

4.5 There are no changes to the substation and welfare buildings.

Table 4.1 Approved and revised building size

Building	Approved size (sq.m)	Proposed size (sq.m)	Difference (sq.m)
Back-up Generator	1,024	341	-683
Intake Ventilation Shaft	1,442	717	-725
Substation Building	491	491	No change
Men and Material Shaft	4,419	3,738	-681
Mineral Shaft Winder Plan	1,642	4,231	2,589
MTS Shaft Building	449	640	191
Welfare Building	2,809	2,809	No change
Total	**12,276**	**12,967**	**691**

4.6 The implication of the above changes to the approved buildings is an overall net increase in floorspace of 691 sq.m.

4.7 The maximum ridge heights for all previously approved buildings will be unchanged as follows:-

Table 4.2 Building heights as shown on the planning drawings and maximum ridge heights

Drawing Number	Name	Max Ridge Height/m
653-AP-0051 Rev3	Back-up Generator	+208.7
653-AP-0052 Rev3	Intake Ventilation Shaft	+208.7
653-AP-0053 Rev3	Substation Building	+208.7
653-AP-0054 Rev3	Men and Material Shaft	+212.8
653-AP-0055 Rev3	Mineral Shaft Winder Plan	+212.8
653-AP-0056 Rev4	MTS Shaft Building	+208.7

4.8 The assumed completion of each of the buildings to allow permanent operations is as follows:-

Table 4.3 Assumed Timescales for Completion of Building/Availability for Operational Use

Name	Part	Item	Date
Back-up Generator	-	Whole building	1/06/2021
Intake Ventilation Shaft	-	Whole building	1/06/2021
Substation	-	Whole building	1/06/2021
Mineral Shaft Winder (1)	1	North and Central	1/07/2018
	2	South	1/06/2021
Men and Material Shaft	-	Whole building	01/06/2021
MTS Shaft Building	-	Whole building	1/06/2021

Note: The North and Central parts of the Minerals Shaft Winder are 3,080 m^2 of the 4,231 m^2 building

4.9 In addition to the above, and for reasons described below, the approved Drift Tunnel and Portal structures (which would have provided access at ground level to a chamber 45m below ground level accessing the Men and Materials Shaft) are proposed to be removed. Men will be transported to the Minehead via the new above ground road (approved via the s96a consent detailed above) and access the mine via the Men and Materials Shaft building. This amendment also removes the requirement for the -45m level road network and the associated grout and concrete.

Amendment 2 - Construction Methods

4.10 The following changes to the construction methods are proposed as part of the s73 submission:-

1 utilisation of permanent winders and headframes for the Mineral Shaft Winder and Men and Material Shaft Winder rather than using temporary headframes. The height of these temporary winders were limited to a ridge height of +212.5m AOD with an above ground height of 45m. Two of the three temporary headframes which had an identified adverse visual impact will not be needed. The third temporary winding tower at the MTS access shaft will be retained as per the approved scheme);

2 the use of the permanent headframes at the outset means that an alternative means is required to allow for access to the shafts as well as for spoil removal (all of which will need to occur at -45m level during both the entirety of the construction and operational phases). The new proposals therefore include the development of a 35m diameter foreshaft in the Men and Materials Chamber and a 32m diameter foreshaft in the Minerals Chamber, both extending down to -50m. Spoil would be brought to the surface via lifting systems installed within the foreshafts. The Drift and bank level roads will not be constructed; and

3 removal of the Grout curtain along the west side of the drill platform and its replacement with more localised D-walling and de-watering process around the Shafts which will have a non-material impact on ground water and aquifer levels. Standard construction dewatering would draw water levels down to -3m for a period to allow the D-walling to be carried out. The dewatering set up for the D-walling would be extended to control water levels to -7m below platform level for the construction of the winder buildings which go down to -6m. As the Drift and bank level roads will no longer be constructed, the use of a Grout curtain for this element of the scheme is also no longer required.

Amendment 3 - Bunding

4.11 The revised scheme will generate no material change in the volumes of spoil at Dove's Nest Farm in comparison to the approved scheme and there will be no change to the final height of the approved screening bunds (namely Bunds A, B, F and G) which surround the drill platform.

4.12 In order to accommodate the revised road layout, the non-screening bunds to the south of the Drill platform have been amended in layout but will remain within the approved maximum height.

Amendment 4 - Water Attenuation (Drainage Ponds)

4.13 The approved scheme shows two large surface water attenuation ponds and a surface water wetland area that will relocated further north within the site. The s73 application will seek approval for the relocation of the ponds and amendment of the ponds to include three smaller surface water ponds and a surface water wetland area, along with the addition of a narrow silt trap in the northern field. The NYMNPA will be aware of some of these changes via information already submitted as part of planning condition applications. The relocation of the water attenuation ponds into northern field removes the requirement to remove trees near Whinny Wood and the need to re-route a power line.

Amendment 5 – Drill Pad Extension

4.14 The approved scheme includes a single drill pad level at between +199.64m and +201.18m AOD and the construction of a grout wall curtain along the west side of the drill platform. Under the Section 96A application, a two tiered drill platform was approved for the northern section of the drill pad at between +199.5m and +204m AOD. This removed the need for significant excavation.

4.15 The s96A application included a single access ramp between the two levels. The development subject to the s73 will include two access ramps, designed to facilitate access around the Drill pad, along with a dividing wall to separate the two levels.

4.16 At the time of submission of the s96A application, the final design for the southern drill pad was unknown. The details have now been finalised and will be included as part of the s73 submission. In brief, the southern section of the drill pad has been designed at a height of between +202.6m and +207.3m AOD (existing ground level). The s73 submission will also reduce the width of the Drill Pad area to accord with the operational scheme, although the requirement for a wider temporary pad remains, as per the approved s96A plans.

4.17 The increase in height of the drill platform has no effect on the maximum AOD ridge height of the mine buildings that will remain within the confinements of the approved building envelope.

Amendment 6 – Internal Access Road

4.18 Under the s96A application, a revised road layout was approved to retain ease of access to the drill platform and to create a number of important highway efficiencies within the overall construction programme. The s73 application will extend this road to connect to the drill pad via a new ramp.

Other Developments and Cumulative Effects

4.19 In accordance with Town and Country Planning (EIA) Regulations 2011 (as updated), the SES will include an assessment of any direct and indirect cumulative effects arising from the inter-relationships between different impacts arising from the development now proposed when considered alongside any other developments in the area surrounding the site. The objective is to identify whether combined effects from the development or impacts from several developments, and which individually might be insignificant could, when considered together, cause a further significant direct or indirect and cumulative impact requiring mitigation.

4.20 A cumulative assessment was undertaken for the ES (September 2014) and SEI (February 2015). The SES which will accompany the Section 73 application will provide an updated cumulative assessment in so far as this is relevant. The cumulative assessment will therefore include a review of the potential for effects when the amended scheme is considered alongside other development proposed since the grant of planning permission NYM/2014/0676/MEIA.

4.21 A review of planning records available to the applicant on the website of NYMNPA has identified no further schemes requiring consideration as part of the SES. If NYMNPA is aware of any proposals that it considers will need to be assessed in terms of potential cumulative effects, please identify these as part of the EIA scoping opinion.

5.0 Review of Potential Environmental Effects

5.1 Regulation 13(2) of the Town and Country Planning (EIA) Regulations 2011 (as updated); establishes those matters which need to be provided to assist the relevant planning authority in forming an EIA Scoping Opinion. Accordingly, a summary of the likely issues, the potential effects and the proposed methodology of assessment for the identified areas of interest are set out in this section.

5.2 In considering the scope of any supplementary environmental information to accompany the s73 application, it is important to identify that the focus of Schedule 4 of the Regulations is the significant effects. Other lesser impacts need not be addressed as part of the EIA process.

5.3 In respect of the proposed amendments to the works at the Woodsmith mine, the starting point in scoping those matters requiring additional or supplementary examination is the original ES (September 2014) (as updated by the SEI, February 2015) (together 'the updated ES') which assessed the following:-

Table 5.1 Matters Considered in the original ES

Traffic and transport	Landscape and Visual Impact
Recreation and amenity	Cultural Heritage
Noise and Vibration	Geology and hydrogeology
Air Quality	Hydrology and Flood Risk
Socio-Economics	Land Use and Soils
Ecology	Special Qualities of the National Park

5.4 In addition, and whilst a S73 application is a new application for planning permission under the Town and Country Planning (Environmental Impact Assessment) Regulations 2011 (as amended) ('EIA Regs 2011'), key planning conditions that ensure the implementation of mitigation and monitoring measures identified in the original ES can be carried forward to any new permission relating to the s73 submission. Following incorporation of the amendments to the development, some conditions may require further consideration and assessment and, where this is relevant, it is proposed to 'scope in' this analysis to the SES to ensure that the NYMNPA are informed on this information as part of the decision making process.

5.5 Against this background, the extent and form of the amendments detailed in Section 4.0 of this Scoping Report have been assessed against each issue identified in Table 5.1. This process has been used to establish those matters which, it is considered, should be 'scoped in' to the SES. In brief, it is considered that it is necessary to provide additional environmental information in respect of the following matters:-

1 Landscape and Visual Impact

2 Geology and Hydrogeology

3 Hydrology and Flood Risk

4 Noise and Vibration

5.6 The review process undertaken to reach this view is described further below. It has been informed by the initial discussions with NYMNPA and key consultees.

Topics to be Scoped In to the SES

Landscape and Visual Impact

5.7 The scheme amendments have the potential to give rise to different landscape and visual impacts when compared to those of the approved scheme and these will be described in the SES. The baseline, setting and receptor information, as set out in the ES (September 2014) and SEI (February 2015), remains applicable to the assessment of the amended scheme. A revised Zone of Theoretical Visibility ('ZTV') and relevant photomontages will be prepared and will employ the same methodology, base models and receptor information as was used for the approved scheme assessment for ease of comparison.

5.8 This section describes the likely extent of any changes to the conclusions of the assessment in the original ES. It also describes the scope of the assessment and the methodological approach to be adopted to establish the likely effects arising from the scheme amendments.

Effects During Construction

5.9 Proposed construction stage changes that could affect landscape and visual matters include:-

- Raising the shaft construction platform and use of a D-walling construction methodology;
- Replacement of the temporary winding towers at the Mineral and Men & Mineral Shafts with permanent winders, enlarged foreshafts and earlier construction of operational shaft top buildings (ahead of the eastern screening mound being formed); and
- Other minor amendments to the construction site layout and equipment types which may also be visible (albeit they are not expected to result in noticeable change when compared to the approved scheme).

5.10 Table 5.2 summarises the issues in more detail and the scope of the Landscape and Visual Impact Assessment to be carried out as part of the SES.

Table 5.2 Scope of Landscape and Visual Impact Assessment relevant to the Construction Phase to be included as part of the SES

Effect	Commentary and Scope of Updated Assessment
Physical Landscape Effects	The physical construction footprint of the s73 scheme would remain broadly the same as the approved scheme. The northern bank of SuDs ponds has been moved to an adjoining pastoral field. Under the approved scheme this field was to be used for temporary spoil storage before being returned to agricultural use. The loss of the field and permanent replacement with SuDs ponds and associated habitat will represent a new permanent physical landscape change. Under the approved scheme, trees that were to be felled to accommodate the northern SuDs ponds will be retained as part of the s73 scheme.
Landscape Character Effects	The approved scheme included three 45m temporary winding towers set on a platform level of 200.7m AOD for a period of 38-47 months. Under the s73 scheme, two of the three towers will be removed. The selected construction methodology employs D-walling rigs which reach up to 26.2m above ground level set on platform levels up to 203.7m AOD. The D-walling rigs will be in place for a time period of 12-18 months, following on from the completion of Phase 3 shaft platform works. The rigs are mobile and relatively transparent (at distance) compared to the solid mass of the enclosed temporary winding tower structures. Under the s73 scheme, only one winding tower would remain, at the MTS shaft. Within the approved scheme eastern and northern screen mounds would be constructed gradually over a period of approximately 3-4 years from the start of construction. Shaft top buildings would then have been constructed. Under the s73 scheme, the buildings

Effect	Commentary and Scope of Updated Assessment
	are constructed at an earlier stage, resulting in some permanent buildings being visible during their construction and until the northern and eastern screen mounds are completed In terms of potential impact on landscape character this is likely to result in the following effects, compared to the approved scheme: • A similar impact across parts of landscape character areas that would be inter-visible with ground level construction activities, D-walling rigs and the remaining MTS temporary winding tower (where ground level activities combined with three temporary winding towers would have been visible in the approved scheme); and • Decreased duration of impact across parts of landscape character areas that are inter-visible with upper sections of the MTS temporary winding tower (where upper sections of temporary winding towers would have been visible for a longer time period in the approved scheme). On the basis of the above, Zone of Theoretical Visibility (ZTV) mapping will be used to check the following: • Areas where D-walling rigs would be visible; • Areas where ground level construction activity, including mounds and buildings would be visible; and • Any change in the approved scheme temporary winding towers ZTV resulting from removal of the Mineral and Men & Mineral Shafts temporary towers. For ground level construction activities, the approved scheme's visual envelope would be re-used, on the basis that mound heights plus the 5m allowance for machinery moving on the mounds is a 'worst case' scenario when compared to building heights. In addition, and to better understand landscape character effects, the s73 scheme construction effects would be illustrated within close range and open/ elevated sample views by updating Photomontage 06 (B1416) and Photomontage 11 (A171 Robin Hood's Bay Road) construction stage views respectively. The following stages of construction would be modelled and presented in the photomontages: • Phase 3 construction platform complete, three D-wall rigs active, with screening to the east limited to the temporary bunds shown on the Phase 3 masterplan; • Phase 3 construction platform, Minerals and Men and Materials Shaft buildings and MTS shaft temporary winding tower all in place, with eastern mounding updated to reflect the expected landform shape at that stage. Using this information, a comparison would be made between the extents of approved and s73 scheme visual envelopes and a descriptive narrative would be provided to identify changes in effects on previously assessed landscape character areas, with any changes in impact category or duration of impact being highlighted.
Visual Effects	The principles outlined above for landscape character would also apply to visual receptors. ZTV mapping as described above will be used to identify whether visual receptors are: • Affected only by views of D-wall rigs; • Affected by ground level activity, including buildings; and • Affected only by views of the upper sections of the remaining temporary MTS winding tower. It is not proposed to undertake a full review of all individual receptors. A descriptive narrative will be provided, reviewing the overall effects of the s73 scheme on geographical groups of receptors. A comparison will be made between approved scheme and s73 scheme effects and any predicted change to previously identified impact categories, or change in the duration of previously identified impacts will be reported.

Effect	Commentary and Scope of Updated Assessment
Other Effects	A descriptive narrative review of potential differences of effect and impact on perceptual qualities, night-time character and special qualities will be provided. Focus will be placed on identifying any changes to previously identified likely significant effects.
Cumulative Effects	Cumulative ZTV mapping, as undertaken for the approved scheme, will be updated using the remaining temporary MTS winding tower at the Woodsmith Mine, and a comparison made between approved scheme and s73 scheme cumulative ZTV extents. A descriptive narrative review of the differences between approved and s73 scheme cumulative effects and duration will be provided.

5.11 The assessment to be reported in the SES will consider the need for new or amended mitigation measures during the construction period in respect of any changes to anticipated landscape and visual effects.

Summary of Proposed Construction Stage Assessment

1 Changes to the physical removal of existing landscape features between the approved and s73 scheme will be shown on a drawing. This will be supported by commentary describing the changes and any change in physical landscape impact due to loss or retention of existing features will be identified.

2 ZTV mapping will be undertaken to understand any difference in visual envelope created by using a single temporary MTS winding tower instead of three temporary winding towers. The approved scheme 'mounds' visual envelope will be re-used as a worst case model for mapping visibility of ground level activities and features (including buildings) around the Woodsmith Mine.

3 Updated cumulative ZTV mapping will be carried out to identify the change in cumulative visual envelope that would arise from using a single temporary MTS winding tower at Woodsmith Mine in combination with previous temporary winding towers at the MTS sites.

4 S73 scheme construction effects will be illustrated within close range and open, elevated views by updating Photomontage 06 (B1416) and Photomontage 11 (A171 Robin Hood's Bay Road) respectively.

5 A descriptive narrative will be provided, reviewing potential changes to landscape character, visual, perceptual, night-time, special qualities and cumulative LVI effects and impacts arising from the s73 scheme compared to those of the approved scheme at the construction stage. Any changes in impact category or duration of impact between the s73 and approved schemes will be highlighted.

6 Updated construction stage LVI mitigation proposals will be proposed where appropriate.

Effects During Operation

5.12 Proposed operational stage changes with the potential to result in changes to landscape and visual impact include the following:-

- Raising of the shaft platform;
- Amendment of shaft top building positions and footprints;
- Removal of the drift access; and
- Amendment of final site contours to accommodate the new internal site road alignment and revised spoil quantities.

5.13 In designing the new shaft platform level and shaft top buildings, the vertical relationship between building ridge height and the height of the approved northern and eastern screening mounds has been retained. This has been achieved by sinking the shaft top buildings further into the ground, compared to the approved scheme, whilst maintaining building ridge heights at approved scheme elevations.

5.14 Revised spoil quantities will enable the retention of the eastern and northern screen mounds to be constructed around the shaft top area with the mounds to the east of the new internal access road being repositioned. As envisaged for the approved scheme the 'Bund C' area, south of the shaft platform, would be used as a balancing area for spoil.

5.15 Table 5.3 summarises the issues in more detail and the scope of the Landscape and Visual Impact Assessment to be carried out as part of the SES.

Table 5.3 Scope of Landscape and Visual Impact Assessment relevant to the Operational Phase to be included as part of the SES

Effect	Commentary and Scope of Updated Assessment
Physical Landscape Effects	The physical footprint of the s73 scheme would be similar to the approved scheme with the exception of the retention of trees in the northern field. Changes to the proposed site landform and associated landscape proposals would be required to accommodate the proposed scheme changes. Compared to the overall scale of the site and the approved scheme, however, these changes will not result in a significant difference to the physical landscape of the operational site when compared to the approved scheme.
Landscape Character Effects	With the retention of the approved scheme screening mounds, landscape proposals and relationship to building heights the external appearance of the s73 scheme would be broadly the same as that of the approved scheme. Changes to building footprints would not affect the wider landscape character, due to buildings remaining hidden behind screening mounds and planting. The degree of building footprint change within the site itself would not be sufficient to alter the approved scheme operational landscape character and the changes would occur within the approved shaft top footprint. Potential exists, however, for increased adverse operational landscape character affects due to the visibility of vehicles moving overland within the site rather than through the Drift. However, amended mounding and planting to the east of the internal road will screen internal site movements from external views. The appearance and character of the amended mounds south of the shaft platform is similar to the approved scheme, and would not exceed approved scheme heights. Landscape proposals would be amended to suit the revised mound shapes but would reflect the design principles established in the approved scheme and would have a similar appearance in external views. Photomontage View 11 would be updated to understand potential amended operational scheme effects on landscape character areas to the east. A written narrative would be provided explaining the character and appearance of the s73scheme and any changes to approved scheme impacts would be identified.
Visual Effects	The external visual appearance of the operational site will not change significantly, with revised bunding south of the shaft platform remaining of a similar character to that of the approved scheme. Photomontage View 11 would be updated to understand potential s73 scheme effects on visual receptors to the east. A written narrative will be provided identifying any scheme changes and potential for change of impact on groups of visual receptors, with an emphasis on checking for likely significant effects. It is not proposed to provide a full assessment of all individual receptors.
Perceptual Effects	The external appearance and noise levels associated with the operational site will not change significantly. Commentary will be made on potential changes to night time perceptual effects due to the amendment of operational scheme lighting and removal of the drift access.

Effect	Commentary and Scope of Updated Assessment
Night-time effects	Removal of the Drift and replacement with overland access could give rise to new night-time operational effects, due to increased visibility of headlights associated with vehicles moving along the road and a requirement for revised lighting around the shaft platform. Screen mounding and planting would be expected to contain glare or light spill from the site. The approved scheme lighting impact assessment would be updated, however, to reflect operational scheme changes.
Special Qualities Effects	The amended site layout would be of a similar appearance and character as that of the approved scheme and would not be expected to result in any change to effects on special qualities when compared to the approved scheme. Removal of the drift and replacement with overland access, however, has the potential to cause impact on the Tranquillity; dark skies special quality. A written commentary would be provided reviewing effects on special qualities, with focus on potential changes of impact on the Tranquillity; dark skies special quality.
Cumulative Effects	Given the lack of inter-visibility between the operational stage mine and MTS sites, and the spatial separation of the sites, no change is predicted from the cumulative LVI effects identified for the approved scheme. It is therefore not proposed to review operational scheme cumulative landscape and visual impacts.

5.16 LVIA mitigation measures for the operational stage will be updated to reflect the layout of the s73 scheme where necessary and appropriate. Additional lighting mitigation measures will also be proposed if required.

Summary of Proposed Operational Stage Assessment

1 A drawing will be produced showing the changes between approved and s73 permanent landscape schemes. This will be supported by commentary describing the changes and any change in permanent physical landscape impact will be identified.

2 The s73 scheme design will seek to prevent visibility of the internal site, revised shaft platform lighting and vehicle lights from surrounding areas. This will be tested and checked using cross sections and an update of the open and elevated Photomontage View 11 (A171 Robin Hood's Bay Road) at Year 1 and Year 15 of operation.

3 A descriptive commentary will be provided reviewing potential changes to landscape character, visual, perceptual, night-time, special qualities and cumulative LVI effects and impacts arising from the s73 scheme compared to those of the approved scheme at the operational stage. An update of the lighting impact assessment will be provided to reflect operational changes. Any changes in impact category or duration of effect between amended and approved schemes will be highlighted.

4 Updated operational stage LVI mitigation proposals will be provided.

Geology and Hydrogeology

5.17 The proposed amendments have the potential to give rise to possible effects on groundwater resources and to hydrogeologically supported ecosystems during both the construction and operational stages of the project. Consideration is given as to whether these effects have the potential to result in different hydrogeological impacts when compared to the approved scheme. Where a difference in impact could potentially arise, the proposed method of checking and assessing this change is then set out.

5.18 Baseline setting and receptor information, as set out in the original ES, remains applicable to assessment of the amended scheme. The assessment will employ the same methodology for undertaking the hydrogeological risk assessment, which will be supported by the groundwater

and ecological receptor information, the extended baseline monitoring undertaken since 2012 and quantitative modelling, where appropriate, as used for the approved scheme assessment.

Effects During Construction

5.19 Proposed construction stage changes that could affect hydrogeological conditions include the following:

- Removal of the Intake Ventilation Shaft, Drift Portal and Tunnel and its associated grouting from the scheme and replacement with the the wider foreshafts in the Men and Materials and Minerals Shafts including diaphragm walling and temporary dewatering;
- Removal of the grout wall and its associated relief drain around the western side of the Drill Platform;
- Raising finished levels to the Drill Platform area, removing the requirement for the geocomposite drainage layer;
- Reduction in the surface area of the temporary storage mound to the south of the Drill Platform and relocation of the attenuation basins to the north of their former position; and
- Replacement of more extensive grouting, groundwater control systems for basement excavations and shaft construction within the Ravenscar Formation with the use of a temporary dewatering system to facilitate caste in-situ construction via diaphragm walling.

5.20 Other minor amendments to the construction site layout have a local and minor change to the hydrogeological system are not expected to result in noticeable change when compared to the approved scheme.

Physical and Chemical Effects

5.21 The principal physical effects on the hydrogeology on and adjacent to the development that may arise from the changes to the approved scheme are:

- Removal of the grout wall, its associated relief drain, the Intake Ventilation Shaft, the Drift Portal and Tunnel and associated grouting will effect groundwater flow paths and possibly groundwater levels in the Moor Grit and Scarborough aquifers;
- Raising of the Drill Platform levels reduces the extent of excavations penetrating below the water table and limits the effect on groundwater levels and flow paths in the Moor Grit aquifer created by the approved scheme's groundwater control measures;
- The introduction of the wider foreshafts constructed using diaphragm walling techniques will locally change the direction of groundwater flow paths in the Ravenscar Formation;
- Temporary dewatering will reduce groundwater levels and flow paths in the Moor Grit and Scarborough aquifers; and
- Reduction in the surface area of the temporary storage mound to the south of the Drill Platform, removal of the temporary storage mound in the northern field and relocation of the attenuation basins into the northern field will locally increase re-infiltration and recharge into the Moor Grit and Scarborough aquifers.

5.22 The construction phase changes, in particular from diaphragm walling replacing grouting, are considered to have no significant change to chemical effects compared to the approved scheme and these will be addressed within the qualitative hydrogeological risk assessment.

Groundwater resources and hydrogeologically supported terrestrial ecosystems

5.23 The construction phase changes in physical conditions may result in the following impacts on the principal sensitive groundwater resources and hydrogeologically supported terrestrial ecosystems, compared to the approved scheme:

- A similar impact on groundwater levels sustaining spring flows utilised for domestic water supplies to Moorside Farm and Soulsgrave Farm from Moorside Farm Spring and Soulsgrave Farm Spring; and
- A similar impact on groundwater levels and spring flows from Moorside Farm Spring sustaining the Spring Flush hydrogeologically supported ecosystem within the Ugglebarnby Moor area of the Special Area of Conservation.

5.24 Hydrogeological modelling will be undertaken of the multi-layered system to simulate the magnitude of effect on groundwater levels and spring flow conditions, as provided for the approved scheme. This modelling will enable evaluation of the magnitude of impacts on the principal sensitive groundwater resources and hydrogeologically supported terrestrial ecosystem.

Summary of Proposed Construction Stage Assessment

5.25 The qualitative risk assessment of chemical impacts of the proposed construction scheme will consider the need for new or amended groundwater and / or surface water monitoring measures during the construction period and will assist in the design of a construction phase monitoring scheme, Trigger Values and a Remedial Action Plan to monitor and control the impacts of these works.

5.26 The quantitative modelling will consider the need for new or amended groundwater management measures during the construction period and will assist in the design of a ground and surface water monitoring scheme, Trigger Values and a Remedial Action Plan to monitor and control the impacts of these works.

Effects During Operation

5.27 Proposed operational stage changes that could affect hydrogeological conditions will essentially be the same as for the construction stage the principal sensitive groundwater resources and hydrogeologically supported terrestrial ecosystem, except that there will be no continuation of the temporary dewatering. As such, the operational stage impacts on groundwater resources and hydrogeologically supported ecosystems will be the same or less than those during the construction phase.

5.28 Hydrogeological modelling will be undertaken to simulate the long-term magnitude of impact of the operational stage on groundwater levels and spring flow conditions, as provided for the approved scheme.

Summary of Proposed Operational Stage Assessment

5.29 The quantitative modelling will consider the need for new or amended groundwater management measures during the operational stage and will assist in the design of a ground and surface water monitoring scheme, Trigger Values and a Remedial Action Plan to monitor and control the impacts of the long term mine operation.

Hydrology and Flood Risk

5.30 The proposed amendments may affect hydrology and Flood Risk during both the construction and operational stages of the project. Consideration is given as to whether these effects have the potential to result in different impacts when compared to the approved scheme. Where a difference in impact could potentially arise, the proposed method of checking and assessing this change is then set out.

5.31 The amendments in the s73 scheme do not affect the baseline hydrology and flood risk information previously provided in respect of the approved scheme. The surface water drainage that has formed the basis of design for the site is not affected by the amendments; however the layout and positioning of drainage features such as swales, filter drains, attenuation ponds, wetlands, and outfalls will be affected by the amendments.

5.32 A revised general arrangement drawing will show the proposed revised location of the drainage features. Calculations will be updated to demonstrate compliance with the design criteria, particularly that the attenuation ponds in the operational phase of the mine have sufficient storage to attenuate the runoff to the greenfield runoff rates for storm events up to the 1 in 100 year plus climate change. This assessment will be reported in the SES.

Noise and Vibration

5.33 Noise and vibration impacts associated with the approved scheme were considered in the original ES in respect of the following sensitive receptors:-

1 Static and mobile plant used during the construction of earthworks, platforms and internal haul routes and access roads;

2 Noise emissions from energy plant used during the construction phase;

3 Construction phase blasting operations;

4 Construction phase spoil movements;

5 Operational phase noise breakout from mine buildings;

6 Operational phase mine ventilation; and

7 Construction and operational phase road traffic noise.

5.34 The above elements were assessed in accordance with relevant technical guidance, using detailed noise modelling. Predicted noise levels were compared to the background noise levels measured at receptors and in accordance with guidance detailed in British Standard (BS) 5228:2009+A1:2014 *Code of practice for noise and vibration control on construction and open sites* and the *National Planning Practice Guidance for Noise* (NPPG Noise, March 2014). Impacts were predicted to be minor adverse at worst, and therefore not significant, at all locations considered in the assessment.

5.35 Planning conditions 18-25 and 26-33 attached to the planning permission for the approved development prescribe the following:-

1 Noise and vibration limits to be complied with at nearby residential and recreational receptors;

2 The production of a Noise and Vibration Management Plan (NVMP);

3 The production of a Blasting and Vibration Management Plan (BVMP);

4 The provision of a scheme of noise and vibration monitoring at the boundary of the site and at identified noise sensitive receptors;

5 The provision of a scheme of blasting vibration monitoring; and

6 The requirement for prior notification of blasting activities.

5.36 The above conditions will adequately address the management and control of noise and vibration at the site. The condition relating to the NVMP requires a separate assessment of noise-generating activities for each phase, based upon the specific construction methods and plant to be utilised within each construction phase. This includes the prediction of noise levels at receptors and is undertaken in the same manner as the assessments presented in the original ES. Phase-specific mitigation measures to control noise and vibration are required to be set out in the NVMP, and this Plan would be produced for the s73 scheme. Compliance with the planning conditions will ensure that the same level of control and mitigation will apply to the s73 scheme, and the objectives of the conditions will be retained.

5.37 The key amendment that could give rise to different effects relates to the removal of the Drift. Construction of the Drift was predicted, within the ES and SEI, to result in noise impacts at Soulsgrave Farm and removal of the Drift could, in effect, remove those impacts during construction.

5.38 Based on information provided to date, the proposed changes to the scheme covered by the s73 scheme are not anticipated to result in any noise and vibration impacts which are materially above those considered in the ES and SEI. There are not anticipated to be any changes to the assessed peak road vehicle numbers or the number of generators required. Diaphragm walling is a construction activity that commonly occurs on construction sites and is frequently used on sites where other techniques would result in unacceptable noise and vibration effects; controls on operating times and numbers of equipment items will be detailed within the NVMP. Activities that may lead to the generation of construction noise and vibration during the works are not anticipated to result in an impact greater than that presented in the ES and SEI.

5.39 During the operation of the mine the removal of the Drift results in the above ground internal site roads being used for vehicular access to the shafts. Given the very low traffic volumes associated with such access it is considered that this will not result in significantly different noise effects to those reported in the ES and SEI during the operational phase.

5.40 The mitigation measures specified by planning conditions 18-25 and 26-33 can be carried forward to appropriately ensure that the noise and vibration effects from the mine will not be significant. However it is recognised that the NYMNPA will require information to confirm the initial conclusions identified in paragraphs 5.36 to 5.39 can be confirmed and that, as a result, the wording of conditions 18-25 and 26-33 remains relevant and can be included as part of any permission arising from the s73 application. It is therefore proposed to scope noise and vibration into the SES.

Topics to be Scoped Out of the SES

Ecology

5.41 Ecological impacts associated with the works at Woodsmith Mine were considered in Part 2 Chapter 11 of the original ES. The original ES included the assessment of potential impacts on ecological receptors (including hydrogeological effects) during the construction, operation and decommissioning phases of the scheme, in accordance with relevant technical guidance. No significant impact on ecological receptors was identified and pollutant deposition at designated ecological sites was not considered to have an adverse effect on habitats.

5.42 The planning conditions relevant to ecology cover the following (included in Conditions 44-60):

- Implementation of a hydrogeological risk assessment (including monitoring and remedial action plan);
- Protected Species Management Plans;
- Breeding bird surveys (focussing on snipe, curlew and nightjar); and
- Implementation of a Landscape and Ecological Management Plan.

5.43 Discussions with Natural England and the Environment Agency in respect to the dewatering strategy and associated potential hydrogeological impacts compared with the consented scheme have been undertaken, along with additional groundwater monitoring. The results of the botanical surveys and the groundwater monitoring to date have shown that the species present are not groundwater-dependent and that there is a low degree of impact around the consented scheme, with no impact on the spring flush habitat around Lousy Lane. As such, the grout curtain previously identified as being required is now not needed.

5.44 Consequently, there are currently no predicted impacts on groundwater-dependent species; any potential for impacts associated with the s73 scheme will be considered further in the hydrogeological assessment as outlined above.

5.45 The amendments covered by the s73 scheme are not anticipated to result in any ecological impacts which are materially above those covered in the original ES. There are no changes to the area of works and therefore there will be no additional ecological receptors affected beyond those considered in the original ES.

5.46 Furthermore, the current planning conditions, if also applied to the s73 scheme, would adequately address the management and control of ecological receptors. Mitigation measures to manage impacts to protected species and habitats are required to be set out in Protected Species Management Plans (PSMPs) (see condition 52 of planning permission NYM/2014/0676/MEIA) and the Landscape and Ecological Management Plan (see condition 57 of planning permission NYM/2014/0676/MEIA) respectively.

5.47 If identical conditions were to be applied to a revised consent such Plans would be provided for the s73 scheme in the same way as has been undertaken to date (e.g. Phase 1, Phase 2 and Phase 3 documents), compliance with the planning conditions will ensure that the same level of control and mitigation will apply to the s73 scheme and the objectives of the conditions will be retained. Therefore there would not be any additional ecological impacts associated with the s73 scheme above that was presented in the original ES and therefore ecology (with the exception of hydrogeological interaction) is proposed to be scoped out of the SES.

Traffic and Transport

5.48 The traffic and transport impacts associated with the works at Woodsmith Mine were considered in the SEI (February 2015) and Transport Assessment. This included the evidence base that informed the forecast traffic movements.

5.49 The traffic movements (for both employees and HGVs) were derived from an understanding of the required materials and resources aligned to a construction programme, to determine peak traffic demand.

5.50 With respect to HGV movements to Woodsmith Mine, it was forecast that there would be a peak 126 two-way movements (i.e. 63 in and 63 out per day) between 7am and 7pm Monday to Saturday[2].

5.51 With regard to employee movements, several scenarios were assessed and presented for managing peak employee movements, including park and ride provision, construction village and direct minibus transfer. A maximum daily peak of 120 two-way employee vehicle movements (i.e. 60 in and 60 out per day) was assessed.

5.52 The assessment considered the impact of these peak vehicle movements on the following effects:

- Severance;
- Pedestrian amenity;
- Fear and intimidation;
- Pedestrian delay;
- Road safety; and
- Junction delay.

5.53 With the introduction of a package of mitigation measures, developed and agreed with statutory stakeholders, the residual impacts were assessed as negligible to minor adverse.

5.54 A key component of the agreed mitigation package for transport is the development of a full Construction Traffic Management Plan (CTMP). Submitted in outline for the application, this document is being developed with input from the appointed contractors to set out the measures, controls and monitoring processes to ensure compliance with the consented peak traffic levels. The key elements to monitoring compliance with the CTMP targets are the provision of a real-time traffic counter at the site access and the establishment of the Traffic Management Liaison Group to oversee the implementation, monitoring and enforcement of construction traffic movements.

5.55 The s73 scheme will not result in a significant change in total HGV movements, nor would it result in an exceedance of the assessed peak HGV and employee vehicle numbers. The details around traffic movements will be contained in the appropriate CTMPs.

5.56 There are two key measures for monitoring compliance with the peak vehicle movement targets in the CTMP. The first, is the use of a real-time traffic counter at the site access and the second, is the establishment of the Traffic Management Liaison Group to oversee the monitoring and enforcement of these movements.

5.57 A full, phase specific CTMP will be submitted for approval prior to the commencement of each construction phase. Sirius Minerals have indicated that they would support an identical condition for the s73 application.

5.58 If a condition requiring a CTMP is applied to a revised consent, future CTMPs will detail measures specific to each phase[3] to achieve compliance with the peak consented traffic levels, taking into account the s73 scheme changes and proposed contractor methods of working. If this approach is adopted the CTMP will continue to provide a mechanism for ensuring traffic demand from the s73 scheme remains within consented envelope.

[2] Sundays were reserved for incidental deliveries, equivalent to 10% of the peak weekday traffic
[3] Phase 1, 2 and 3 already submitted

5.59 This section demonstrates that, with the implementation of the agreed mitigation measures, notably the CTMP, the peak vehicle movements from Woodsmith Mine for the revised scheme, can be managed within the consented peak levels.

5.60 Therefore, it is considered that the conclusions of the application remain valid and as such, it is proposed to scope Traffic and transport out of the SES.

Recreation and Amenity

5.61 The assessment of impacts on recreation and amenity within the original ES was undertaken in accordance with relevant policy and legislation, and following consultation with relevant stakeholders. The assessment considered the potential for impacts during the construction, operation and decommissioning phases on the following:

- Obstruction to and disturbance of users of Public Rights of Way (PRoW);
- Disturbance to users of PRoW;
- Obstruction and disturbance to cyclists and equestrians;
- Obstruction and disturbance to users of sports and recreation facilities; and,
- Obstruction to and disturbance of users of open access land and public open space.

5.62 The original ES concluded that the residual impact on recreation and amenity following the implementation of mitigation measures were, at worst, of minor adverse significance, and during only the construction phase, assuming a "realistic worst case" scenario. Impacts were principally expected to occur due to traffic, noise and landscape and visual aspects.

5.63 The amendments are confined to the study area and development site boundary considered in the original ES. It is not anticipated that there would be any change in the peak numbers of traffic movements or in traffic routing associated with the s73 scheme, and the impacts presented in the original ES therefore remain unchanged. It is anticipated that plant used for the s73 scheme would be of an equivalent size and type to those considered in the original ES and therefore additional noise and air quality impacts will not arise that affect recreation and amenity receptors.

5.64 The existing planning conditions include requirements to control emissions to air, for noise assessment and monitoring and for traffic routing, to ensure that impacts are no worse than those considered the original ES. It is therefore considered that there would not be any material recreation and amenity impact associated with noise, transport and air quality as a result of the s73 scheme. Changes to landscape and visual aspects are to be considered as identified above and the potential for any associated impacts on recreation and amenity will be determined as part of that assessment. No additional standalone assessment of recreation and amenity effects is therefore considered to be required as part of the SES.

Air Quality

5.65 Air quality impacts associated with the works at Woodsmith Mine were considered in Part 2 Chapter 9 of the original ES. The original ES included the assessment of potential impacts associated with the following elements of the scheme which will result in emissions to air:

- Construction, earthworks and trackout activities;
- Construction phase plant and Non-Road Mobile Machinery (NRMM) exhausts;
- Fuel combustion in energy plant used during the construction phase;

- Construction phase blasting operations;
- Operational phase mine ventilation; and
- Construction and operational phase road traffic exhaust emissions.

5.66 Impacts were considered both at human receptors and upon designated ecological sites. The above elements were assessed in accordance with relevant technical guidance, using detailed dispersion modelling where appropriate. Predicted pollutant concentrations were compared to the government's statutory human health-based air quality objectives and relevant ecological significance criteria. Impacts at human receptors were predicted to be negligible, and therefore not significant, at all locations considered in the assessment. Pollutant deposition at designated ecological sites was not considered to have an adverse effect on habitats.

5.67 Planning conditions on permission ref: NYM/2014/0676/MEIA relevant to air quality cover:

- The control of emissions associated with generators used during the construction phase;
- Quantification of emissions associated with construction vehicles and plant; and
- Mitigation measures to minimise the generation of dust and fine particulate matter, and monitoring of dust deposition.

5.68 The amendments covered by the s73 scheme are not anticipated to result in any air quality impacts which are materially above those identified in the original ES. The assessed road vehicle numbers may be subject to change, however that peak traffic numbers, on which the air quality assessment was based, would not change. As air quality impacts associated with the construction phase were predicted to be negligible at all receptor locations in the original ES, it is not considered likely that there would be a greater impact. Whilst different construction plant may be used, it is anticipated that these will be of an equivalent size and type to those considered in the original ES, and with similar fuel consumption, therefore the emissions are likely to be comparable. Activities that may lead to the generation of construction dust and fine particulate matter during the works are not anticipated to result in an impact greater than that presented in the original ES. There will be no changes to the number of generators required, although their location and operational profile may change. However, if the current planning conditions are also applied to the s73 consent, these would adequately address the management and control of emissions.

5.69 Mitigation measures to control dust and fine particulate matter emissions and from NRMM exhaust releases are required to be set out in a Dust Management Plan (DMP) (condition 93 of permission NYM/2014/0676/MEIA) and Construction Vehicle and Plant Management Plan (CVPMP) (condition 92). Compliance with the planning conditions will ensure that the same level of control and mitigation will apply to the amended scheme, and the objectives of the conditions will be retained. Therefore there would not be any material additional air quality impact associated with the amended scheme above than that presented in the original ES, and air quality is proposed to be scoped out of the SES.

Socio-Economics

5.70 The socio-economic effects of the approved scheme were considered in Part 2 Chapter 10 of the original ES. The original ES considered impacts of the realistic worst case scenario upon the issues including employment opportunities, tourism and demand for accommodation by employees.

5.71 The ES identified that the residual impacts identified during construction were either major beneficial (increase in GVA at the NYMNPA/district level), moderate beneficial (increase in GVA

at the LEP level), minor beneficial (peak construction employment) or negligible (impact on social and community infrastructure and crime, or fear of crime). The indirect tourism effects were identified as minor adverse, however suggested mitigation measures included a marketing programme to offset negative perceptions.

5.72 During operation, the residual impacts were identified as either major beneficial (direct employment effects at the NYMNPA level and indirect and induced employment effects at the LEP level), moderate beneficial (direct employment effects at the travel to work area level), minor beneficial (direct employment effects at the LEP level) or negligible (demand for social and community infrastructure, indirect & induced employment at the UK level, crime and fear of crime and loss of direct and indirect employment).

5.73 No impacts identified in the ES (September 2014) were altered as a result of the scheme updates outlined in the SEI (February 2015).

5.74 The amendments covered by the s73 scheme are not anticipated to result in any changes to the employment or wider socio-economic impacts to those identified in the original ES. Therefore socio-economics is proposed to be scoped out of the SES.

Above and Below Ground Heritage

5.75 The original ES included an assessment of a small number of non-designated cultural heritage assets within the mine site. The assessment concluded that any impacts were expected to occur during the construction phase, with no physical impacts predicted during the operation or decommissioning stages. There are no heritage assets in the wider vicinity that would be permanently significantly affected by changed to their setting as a result of the development.

5.76 Condition 95 of permission ref: NYM/2014/0676/MEIA requires the submission of a Written Scheme of Archaeological Investigation for the Woodsmith Mine site, with the agreed scheme to be implemented prior to the commencement of development and alongside construction operations.

5.77 As the amendments proposed within the s73 scheme will not alter the broad area of built development, the amendments are not considered to give rise to any new or amended effects either directly or indirectly on above and below ground heritage over those already identified and mitigated for within the original ES and subsequent planning permission. As such, it is proposed to scope this topic out of the SES.

Land Use and Soils

5.78 The land use and soils assessment included in the original ES for the consented scheme adopted a 'reasonable worst case' scenario, and assumed that:-

- The construction phase mining platform area, welfare area and internal roads would be entirely covered by impermeable hardstanding. The platforms would be of a granular surface but may also incorporate an impermeable clay liner;
- Construction would continue throughout the year (for the purposes of assessing disturbance to soils); and
- 1% of soil may prove to be unsuitable for reuse (with other topsoil and subsoil reused on site) with disposal off-site. However, the scheme design proposes that no materials are expected to be exported from the site.

5.79 The original ES considered the effects during construction, operation and decommissioning including land taken out of existing use, or restrictions on use; degradation of soils and soil

sealing; loss of soil resource through erosion, or through removal; alteration of existing drainage systems; biological contamination; re-routing of underground services; and loss of areas subject to environmental stewardship agreements. It included engagement with relevant stakeholders and was carried out in compliance with all appropriate standards, guidance, and practice. Only very localised areas of potential contamination were identified, which is typical of a farm environment. Where contamination precludes the reuse of soils, they will be removed from the site. Following implementation of a range of mitigation measures the residual effects were predominantly negligible, with only a limited number of minor adverse impacts.

5.80 Planning conditions attached to permission ref: NYM/2014/0676/MEIA relating to land use and soils are primarily delivered through the detailed content of the Construction Environmental Management Plan (CEMP) (condition 93) and a separate Soil Management Plan (condition 76).

5.81 The amendments are limited to the construction methodology and the built form, and will be confined to the study area and development site boundary previously assessed. It is not considered to have the potential to result in new or worse environmental impacts on any identified receptor above those presented in the original ES. No new sources or pathways for impact will be introduced and as such there is not expected to be any alteration to the assessment detailed in the original ES. Any potential impacts associated with the amended scheme would be adequately managed through the adoption of conditions identical to those currently applied. Therefore, it is proposed to scope out land use and soils.

Special Qualities of the National Park

5.82 The North York Moors Management Plan sets out a list of special qualities (SQ1 to SQ14) that comprise the essential characteristics of the National Park. The potential impacts on the above special qualities were considered for each technical topic and in a standalone chapter (combination effects) within Part 3 of the original ES for both the mine and MTS.

5.83 The largest magnitudes of impact were predicted to occur during the construction phase; special qualities SQ2, SQ12 and SQ14[4] were considered to be of moderate to major adverse significance. Impacts associated with SQ2, SQ12 and SQ14 were predicted to occur as a result of landscape, visual and noise effects – these include those associated with the impact on landscape character, views and night-time effects. Landscape, visual effects and noise are proposed to be scoped into the SES and therefore the interaction with special qualities will be considered under each topic.

5.84 Effects on special qualities were predicted to be of minor adverse significance as a result of land use and soils, ecology and cultural heritage aspects in the original ES. However, as set out above, the amendments associated with these topics in the s73 scheme will not lead to impacts above those presented in the original ES. There are also a number of existing planning conditions relating to these topics that include the provision of mitigation and control measures. These conditions would be applied to the amended scheme, and therefore provide for adequate management and control of special qualities in relation to these aspects, and no further assessment is required.

5.85 As a result, it is considered that a discrete analysis of the Special Qualities of the National Park can be scoped out of the SES. However the interaction with special qualities as part of the landscape & visual impact and noise & vibration topics.

[4] SQ2 - Wide sweeps of open heather moorland; distinctive dales, valley and inland headlands
SQ12 - Tranquillity; dark skies at night and clear unpolluted air
SQ14 - A place of artistic, scientific and literary inspiration; a heritage of authors, artists, scientists and explorers

Summary

5.86 As a result of the appraisal identified above, it is considered that the scope of the SES in respect of the amendments to the development should comprise:-

1 Landscape and Visual Impact

2 Geology and Hydrogeology

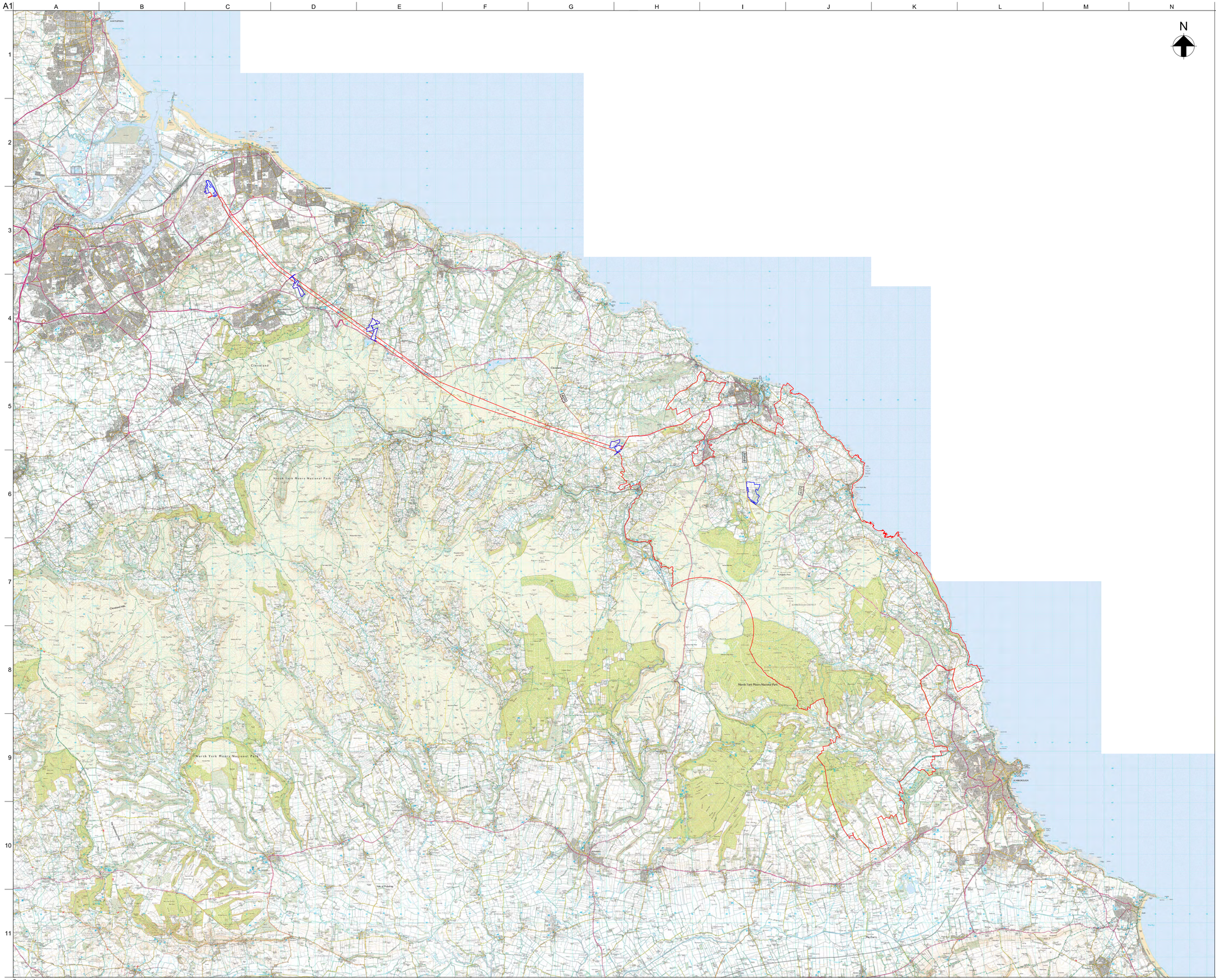
3 Hydrology and Flood Risk

4 Noise and Vibration

5.87 The amendments will be assessed as relevant in respect of both the construction and operational phases of development. Any changes to the direct and indirect effects to those identified in the original ES will be identified; as well as any other secondary, cumulative, short, medium and long term, positive and negative effects that arise from the amended scheme.

Appendix 1: Site Boundary Plan (Ref: YP-P2-CX-550 Rev 1)

A1



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Issue	Date	By	Chkd	Appd
1	13/02/15	SM	CW	AG
	Issue			
0	02/10/14	KK	CW	AG
	Issue			

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Client
York Potash Ltd

Job Title
York Potash

Site Location Plan

Scale at A1 1:100000

Discipline Highways

Job No **234376-00**

Drawing Status **Issue**

Drawing No **YP-P2-CX-550**

Issue **1**

Do not scale

Appendix 2: Extent of Woodsmith Mine Site (Ref: 653-AP-0002 Rev 2)