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NYMNP

16/11/2018

**Date:** 16 November 2018  
**Our ref:** 50303/04/HS/JCx/16784168v1  
**Your ref:** NYM/2017/0505/MEIA

Dear Rob

## **North York Moors: Application to Partially Discharge Condition 73 of NYM/2017/0505/MEIA**

On behalf of our client, Sirius Minerals Plc (Sirius Minerals), Lichfields is pleased to submit this application to partially discharge planning condition 73 (woodland management plan) of NYM/2017/0505/MEIA at Woodsmith Mine.

### **Condition 73**

Condition 73 of NYM/2017/0505/MEIA states that:

*Prior to the commencement of each Phase of Construction at DNF a scheme to maintain and manage the Haxby and Belt Plantations with the exception of areas agreed for removal as part of the approved works as shown on plan 2309.MH02 rev 04 shall be submitted to and approved by the MPA.*

*The details shall include the phased felling and replanting for long term management of the Plantations.*

*The scheme shall be implemented in accordance with the approved details and thereafter maintained for the life of the development.*

The enclosed "Scheme for Maintaining and Managing the Haxby & Belt Plantations" (ref. 40-SMP-WS-8323-PA-PL-00001) provides the latest scheme for maintaining and managing the belt plantations. As such, it provides an update to the earlier management scheme that was submitted and approved as part of the Phase 3 works (ref. 1000-ENV-EXE-REP-001) under application ref. NYM/2017/0258/CVC. Further updates to the scheme will be submitted as part of future discharge of condition applications, in particular to provide more detailed plans for maintaining and managing Haxby Plantation.

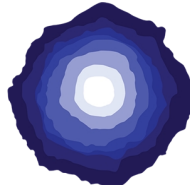
We trust that this document provides you with the necessary information to be able to partially discharge condition 73 but should you wish to discuss further, please do not hesitate to contact me.

Yours sincerely



**James Cox**  
Senior Planner

Copy – Sirius Minerals



Project Title / Facility Name:  
**North Yorkshire Polyhalite Project**

Document Title:  
**SCHEME FOR MAINTAINING AND MANAGING THE HAXBY & BELT PLANTATIONS**

NYMNPA

16/11/2018

**Document Review Status**

- 1. Reviewed – Accepted – Work May Proceed
- 2. Reviewed – Accepted As Noted, Work May Proceed, Revise & Resubmit
- 3. Reviewed – Work May Not Proceed, Revise & Resubmit
- 4. For information only

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C	09-Nov-2018	Review	IFR	HillVict		
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**40-SMP-WS-8323-PA-PL-00001**

# Woodsmith Mine: Scheme for Maintaining and Managing the Haxby & Belt Plantations

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Revision	Date	Prepared by	Checked by	Approved by	Reason for Issue
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# Woodsmith Mine: Scheme for Maintaining and Managing Haxby and Belt Plantations

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# Woodsmith Mine: Scheme for Maintaining and Managing Haxby and Belt Plantations

## 1 Introduction

### 1.1 The purpose of this document

This document forms the scheme for managing and maintaining the Belt Plantations at Woodsmith Mine. Future updates will cover more detailed plans for Haxby Plantation. This is an update to the earlier management scheme that was submitted and approved as part of the Phase 3 works (ref. 1000-ENV-EXE-REP-001).

The scheme is required to fully discharge Condition 73 of the North York Moors National Park Authority (NYMNPA) planning permission NYM/2014/0676/MEIA (as subsequently varied by NYM/2017/0505/MEIA).

### 1.2 Compliance with Condition NYMNPA 73

The wording of Planning Condition 73, and where the necessary material has been provided within this document is set out in Table 1.

**Table 1 : Details of NYMNPA Planning Condition 73**

NYMNPA Condition 73	Compliance with Condition 73
Prior to the commencement of each Phase of Construction at DNF a scheme to maintain and manage the Haxby and Belt Plantations with the exception of areas agreed for removal as part of the approved works as shown on plan 2309.MH02 rev 04 shall be submitted to and approved by the MPA.	This document
The details shall include the phased felling for long term management of the Plantations.	Section 3.0
The scheme shall be implemented in accordance with the approved details and thereafter maintained for the life of the development.	This document sets out Sirius' commitment to implementing and maintaining the proposed scheme for the life of the development

### 1.3 Property Details

**Table 2 : Property Details**

Woodland Property Name: Belt Plantations, Woodsmith Mine, Sneaton, Whitby			
Name	York Potash Limited	Owner: York Potash Limited	Tenant: N/A
County	North Yorkshire	Local Authority	The National Park Authority
Grid Reference	Centre of Western Belt: NZ 8924 0527 Centre of South West Belt: NZ 8933 0468		
The woodland has been identified for thinning. Replanting will then commence and help to increase density and natural habitats within the Western and Southern Belts.			
Do either of the following apply to this land?	Felling Licence		Yes
	Woodland Regeneration Grant		No

## 2 Vision and Objectives

### 2.1 Vision

Development at Woodsmith Mine is permitted (NYM/2017/0505/MEIA), subject to a number of conditions. Condition 73 requires submission and approval of a plan for maintaining Haxby Plantation and the 'Belt Plantations' that provide screening for the site.

The belt plantations are over 100 years old and comprise a mix of species including birch (*Betula pendula*), rowan (*Sorbus aucuparia*), oak (*Quercus robur*), holly (*Ilex aquifolium*), sycamore (*Acer pseudoplatanus*), and Scots pine (*Pinus sylvestris*).

This document outlines the proposed short to long term management plans for the belt plantations to the west and south of the mine site. It has been developed in conjunction with NYMNPA.

Following a meeting with the NYMNPA at the end of July 2018, trees on the western and southern belts close to the mine site perimeter were identified and marked up for thinning. The felling will allow increased light levels into the woodland which will aid the replanting programme. Replanting of further species will commence in the later months of 2018 or early 2019. The aim of the thinning and planting is to increase woodland diversity and enable a denser natural barrier around the mine site perimeter. Tree species which have been identified for enrichment planting will mimic those on the opposing verge to the West of the site on Ugglebarnby Moor shown in Figure 1.



**Figure 1 : Ugglebarnby Moor**

These species are, birch (*Betula pendula*), rowan (*Sorbus aucuparia*), holly (*Ilex aquifolium*), sycamore (*Acer pseudoplatanus*), and Scots pine (*Pinus sylvestris*). Oak (*Quercus robur*) and hazel (*Corylus avellane*) will also be planted with the establishment of a holly (*Ilex aquifolium*) matrix throughout both belts, increasing understory screening of diffuse views of the mine site. (Figures 2 and 3)





**Figure 2 : Western Belt Plantation**



**Figure 3 : Current Species Distribution**

Holly (*Ilex aquifolium*), which is already naturally self-seeding and regenerating, will be established at approximately 10m centres.



**Figure 4 : Example of Holly Cover and Self-Seeded Growth**

Areas of Holly growth as shown within Figure 4 will be marked post felling and spacing will fan out from these positions. Officers at NYMPNPA have advise the that Holly shouldn't exceed 30% of planned cover. In addition to Holly, Hazel will be incorporated into this matrix at around 10%.

Pine and Oak will be also planted in modest numbers on the outer edge of any grouped planting (5-10%) to ensure that there is a succession of long living canopy species. Pine will be planted in drier ground but will not exceed 20% as advised by NYMNPA.

Grey or Goat Willow are an option to be used in wetter sections and along the internal edges. Birch and Rowan are already regenerating, and this may negate the need for planting, although seedlings may need to be protected from mammal damage.

## 2.2 Objectives

**Table 3 : Management Objectives**

No.	Objectives
1	Identify and secure trees for long term retention
2	Mark up trees for felling that will enable increased light levels to help with the planned belt regeneration planting
3	Increase woodland density on the Western and Southern Belts at Woodsmith Mine, Sneaton, Whitby
4	Satisfy relevant planning conditions

## 2.3 Plan Review

**Table 4 : Plan Review**

Objectives	Achievement
Increase vegetation density within the Belt Plantations.	Long Term
Increase habitats for wildlife.	Medium Term

Objectives	Achievement
Improve natural screening of the mine site lowering its visual impact	Medium Term
Increase light levels to help promote growth of newly planted trees and bushes.	Short Term
Protect newly planted shrubs and tree whips	Short Term

## 2.4 Biodiversity and Species Survey Information

### 2.4.1 Ecology

Sirius Minerals tree felling will be carried out in accordance with the construction and ecology principles and procedures that have been approved by NYMNPA for the removal of trees during Phases 2 and 3 of the development. All works of vegetation clearance undertaken at Woodsmith Mine to date have had pre-checks carried out by a suitably qualified ecologist.

## 3 Felling

### 3.1 Access and Egress

#### 3.1.1 Western Belt

The western belt will be accessed and egressed via the substation gate to the west of the site as indicated by the red arrow in Figure 1.

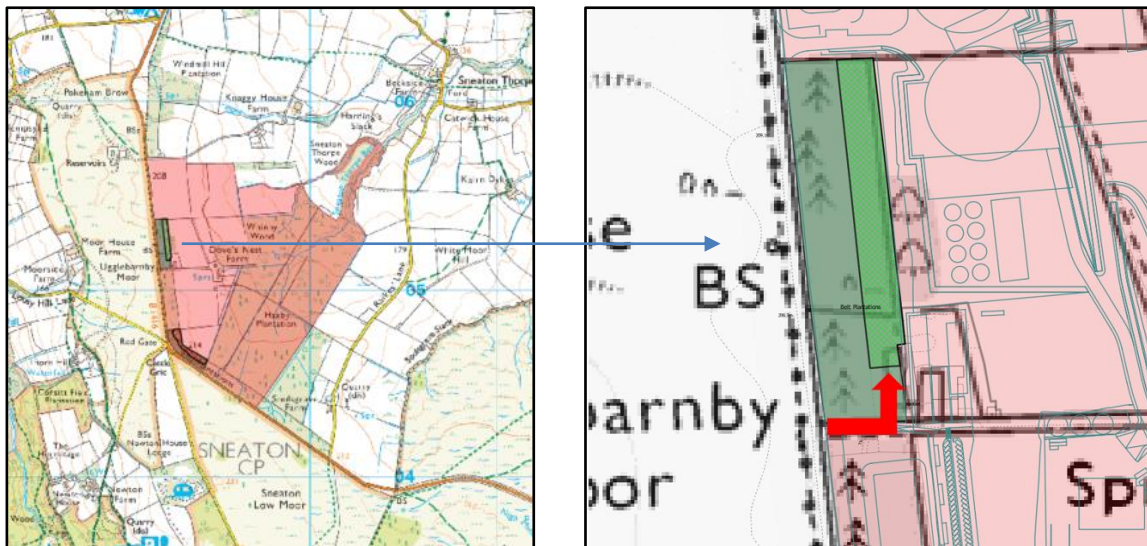


Figure 5 : Access to the Western Belt

### 3.1.2 South West Belt

Access and egress will be attained from the mine site away from the road (B1416) as indicated by the red arrows, or at the safest point to do so in relation to construction activities. Another option is to use the same access as for the western belt and head south following the outer perimeter fence.

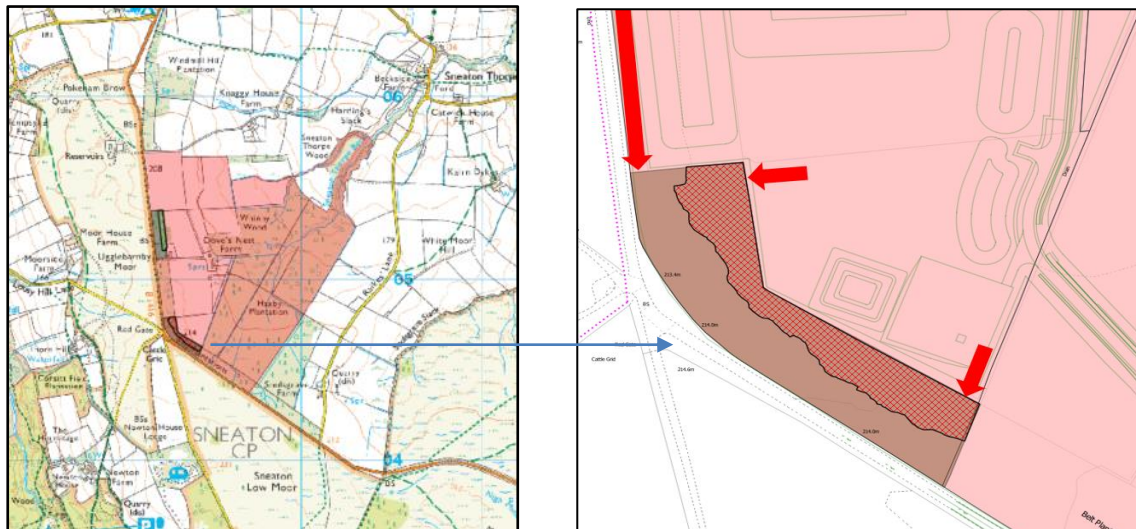


Figure 6 : Access to the South West Belt

### 3.2 Felling Estimates

The below felling estimates from Table 5 have been calculated by an experienced Forester and submitted to the Forestry Commission as part of the licence application. The Forestry Commission visited the site on the 4<sup>th</sup> October 2018 and that the likely issue date for the licence would be mid-November.

Table 5 : Felling Volume Estimates

Cpt	sub-cpt	Ha	Net (ha)	Pyr	Main Species	Height m	Fell/Thin vol/ha m3	Av DBH cm	Average stem size m3	Total Vol m3	Est tonnes	No. trees
West Belt	(east)	0.58	0.58	1950	Birch	16.0	14	17	0.13	8	7.6	62
					Alder	14.5	7	24	0.31	4	4.2	13
					(ROW/OK/WL)		21					
South Belt	(east)	0.67	0.67	1950	Birch	16.4	10	16	0.11	7	6.2	61
					Alder	18.4	5	18	0.19	3	3.2	17
					Rowan	14.7	2	14	0.08	1	1.5	18
							17					
<b>Total</b>		<b>1.25</b>	<b>1.25</b>	<b>ha</b>					<b>24</b>	<b>22.7</b>	<b>171</b>	

### 3.3 Contractor

The felling will be by chainsaw method and not a machine harvester. There will, however, be the need for a tractor and a winch for health and safety reasons, especially within the western belt where some of the larger trees are close to the perimeter fence and adjacent to a walkway. The tree felling contractor will have extensive experience undertaking this type of work in similar environments where ecological sensitivities must be understood and addressed. Felled trees will remain on site in small piles providing natural habitats.

## 4 Replanting

### 4.1 Species

The replanting of trees will be managed and monitored by Sirius employees and all trees will be protected by 1.2m tubes. The earliest the trees will be available for planting is early December with planting likely to commence during January 2019. Trees will be planted at 2m x 2m spacings, or closer where increased density of a felled area is required. Pruning of the established understory in relation to larger bushes may also be trialed to see if this helps to increase woodland density which is of benefit for the screening of the mine site but will also provide further natural habitats for wildlife.

Tree species that will be planted, post thinning, include:

- Hazel: 10% (Matrix). Planting 10m x 10m throughout the whole belt, 2m x 2m in thinned areas;
- Holly Matrix: 30% (Matrix). Planting 10m x 10m throughout the whole belt, 2m x 2m in thinned areas;
- Birch: 20%. Planting 2m x 2m in thinned areas;
- Rowan: 15%. Planting 2m x 2m in thinned areas;
- Oak: 10%. Planting 2m x 2m in thinned areas;
- Grey and Goat Willow: 10%. 2m x 2m in thinned areas (Wet Areas); and,
- Scots Pine: 5%. Planting 2m x 2m in thinned areas (Dry Areas).

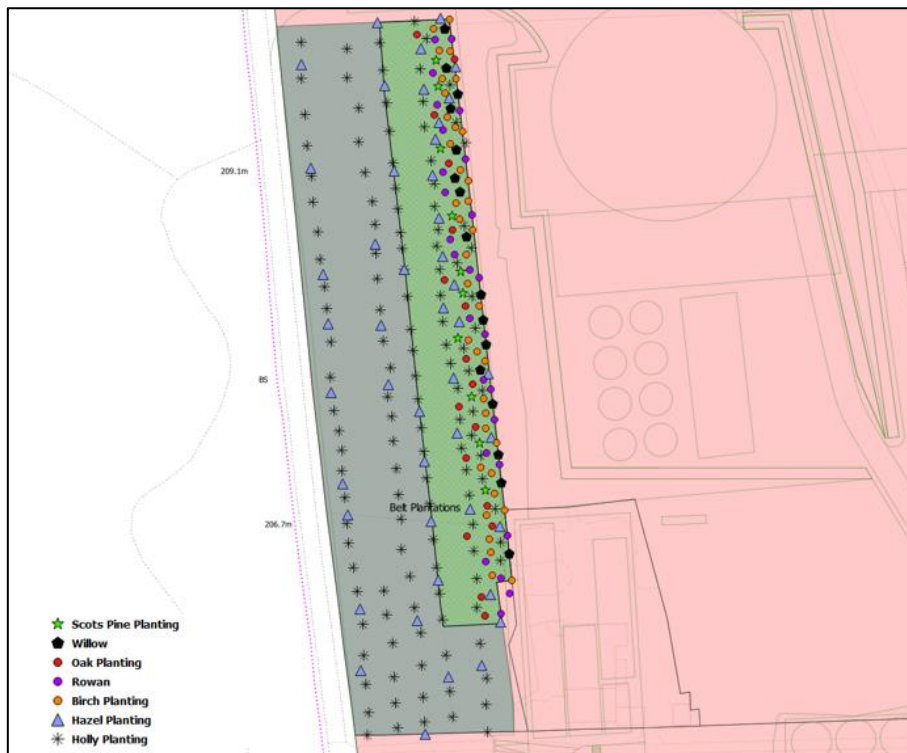
Table 6 indicates the approximate numbers of trees to be planted based on the advised percentages and spacings by officers at NYMNPA. Figure 7 shows a representation of how this will look<sup>1</sup>. 10m x 10m spacings will be used for the matrix and 2m x 2m for any regeneration planting.

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<sup>1</sup> Note that the exact positions for planting will not be determined until thinning has been completed. Trees will be planted at approximately 2 x 2m spacing (or closer) in thinned areas

**Table 6 : Western Belt: Distribution and Total Number of Trees to be Planted**

	Length (m)	Width (m)		
Approx. Woodland Dimensions	260	60		
NYMNP Suggested Species for Re-planting	Suggested Coverage (%)	Approx Number of Rows	Number of Trees to be planted per Row	Total Number of Whips to Order
English Holly	30	5	24	120
Hazel	10	5	8	40
Birch	20	5	16	80
Rowan	15	5	12	60
Oak	10	5	8	40
Willow (Grey and Goat)	10	5	8	40
Scots Pine	5	5	4	20
<b>Total</b>	<b>100</b>		<b>80</b>	<b>400</b>



**Figure 7 : Distributional Representation of Replanting in the Western Belt**

**4.1.1 Western Entrance Screening**

In addition to replanting on the western belt post felling, attention will be given to the west gate substation entrance. Here, dense understory planting will be established in the area to the right-hand side of the gate (as shown in Figure 8), seeking to screen close range views of the mine site from the B1416. Coupled with the proposed Holly matrix within the belt itself, the overall aim will be to create a natural barrier between the mine site and the B1416.



**Figure 8 : Replanting at the Western Substation Gate**

#### 4.1.2 South West Belt

Table 7 indicates the approximate numbers of trees to be planted based on the advised percentages and spacings advised by NYMNPA. Figure 9 shows a representation of how this will look<sup>2</sup>. 10m x 10m spacings will be used for the matrix and 2m x 2m for any regeneration planting.

**Table 7 : South West Belt Distribution and Total Number of Trees to be Planted**

	Length (m)	Width (m)		
Approx. Woodland Dimensions	270	70		
NYMNP Suggested Species for Re-planting	Suggested Coverage (%)	Approx Number of Rows	Number of Trees to be planted per Row	Total Number of Whips to Order
English Holly	30	5	25	125
Hazel	10	5	8	42
Birch	20	5	17	83
Rowan	15	5	13	63
Oak	10	5	8	42
Willow (Grey and Goat)	10	5	8	42
Scots Pine	5	5	4	21
<b>Total</b>	<b>100</b>		<b>83</b>	<b>417</b>

<sup>2</sup> Note that the exact positions for planting will not be determined until thinning has been completed. Trees will be planted at approximately 2 x 2m spacing (or closer) in thinned areas



Figure 9 : Distributional Representation of Replanting in the South West Belt



## 5 Summary

It is the expectation that the Forestry Commission will approve a 3-5-year felling licence by mid-November for the specified areas within the belt plantations.

Felling will commence at the end of November in line with any Ecological requirements.

The replanting operation will be planned during December and an order placed ready for replanting in January 2019.