

Sirius Minerals Plc

Woodsmith Mine - Phase 5 Works

**NYMNPA 45 and 87 Deep
Reinjection Borehole, Recharge
Trench and Groundwater Drainage
Programmes**

40-ARI-WS-71-PA-RP-1060

Issue 0 | 9 May 2018

This report takes into account the particular instructions and requirements of our client.

It is not intended for and should not be relied upon by any third party and no responsibility is undertaken to any third party.

Job number 253285

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Contents

	Page
1 Introduction	1
1.1 Overview	1
2 Programme	1
2.1 Deep ReInjection Borehole	1
2.2 Recharge Trench	2
2.3 Groundwater Drainage	2

Appendices

Appendix A

Outline Deep ReInjection Borehole Programme

1 Introduction

1.1 Overview

This document has been prepared on behalf of Sirius Minerals PLC and details the programmes for the Deep ReInjection Borehole, Recharge Trench and Groundwater Drainage for the Phase 5 construction activity at Woodsmith Mine (Phase 5 Works). This is required to discharge conditions 45 and 87 of planning permission ref. NYM/2014/0676/MEIA (as varied by planning permission NYM/2017/0505/MEIA).

This report only details the works required at the Woodsmith Mine site.

The Phase 5 Works comprise:

- Construction of Service Shaft foreshaft chamber to a depth of 168.7m AOD;
- Construction of Service Shaft permanent winder foundations to a depth of 197.17m AOD;
- Construction of Service Shaft permanent winder basement to a depth of 194.17m AOD;
- Construction of Service Shaft permanent building foundations to 202.2m AOD;
- Dewatering of Service Shaft foreshaft and platform to facilitate excavations;
- Excavation and construction of a working platform area on the western edge of the Production Shaft platform, with an AOD of 203.7m;
- Stockpiling of extractive material for re-use.

2 Programme

2.1 Deep ReInjection Borehole

The deep reInjection borehole is not required until the service shaft sink reaches the Sherwood Sandstone aquifer. Based on the current programme this is expected to be in May 2020. The overall programme for installation and permitting of the deep reInjection borehole is approximately 16 months, consequently this is not scheduled to begin until January 2019. A detailed programme will therefore be submitted as part of a later phase of works. Refer to Appendix A for an outline programme.

2.2 Recharge Trench

The recharge trench is required to promote re-infiltration of surface water to recharge the Moor Grit aquifer on the western perimeter of the site. This recharge is modelled as being necessary when the development of the largely impermeable surface of the landscape mitigation/drainage catchment "Bund C" has been constructed and the eastern perimeter bunds are largely in place. This will be in mid-2020. The exact timing of the development of the recharge trench will be confirmed via further submission of updated Hydrogeological Risk Assessments for future phases of development.

2.3 Groundwater Drainage

The provision of groundwater drainage areas beneath parts of Bunds E and F is required to collect spring water issues from the Scarborough and Cloughton formations. The exact timing of the development of these groundwater drainage areas will be confirmed as part of the submissions for future development phases, however at this stage it is anticipated that these will be constructed within the Bund F area during Spring 2019, followed by Bund E during Summer/Autumn 2019.

Appendix A

Outline Deep ReInjection Borehole Programme

