

REPORT

Phase 3 - Woodsmith Mine Protected Species Management Plan - Reptiles

Client: Sirius Minerals Plc

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1 Introduction

1.1.1 In 2014 a planning application (reference NYM/2014/0676/MEIA) was submitted to North York Moors National Park Authority (NYMNPA) for permission to develop a polyhalite mine and underground Mineral Transport System (MTS). Planning consent was subsequently granted in 2015 subject to conditions.

1.1.2 This document has been prepared on behalf of Sirius Minerals plc (Sirius Minerals) and details a Protected Species Management Plan (PSMP) for reptiles for the Phase 3 (see Paragraph 1.1.4 below) Works at Woodsmith Mine (formerly known as ‘Dove’s Nest Farm’). This document is required to partially satisfy the requirements of condition 52 of NYMNPA planning permission NYM/2014/0676/MEIA. It has been prepared in accordance with current good practice and in line with all relevant environmental legislation. This planning condition states that:

Table 1-1 Condition NYMNPA-52 Protected Species Management Plan - Reptiles

Condition	Compliance with Condition NYMNPA-52
Protected Species Management Plans (PSMPs) shall be submitted to the MPA [Mineral Planning Authority] prior to the commencement of Preparatory Works which shall not commence until the PSMPs have been agreed in writing by the MPA	This document for reptiles during the Phase 3 works and is ongoing throughout Phase 3.
The agreed details shall subsequently be followed unless modifications are agreed in writing with the MPA.	
The PSMPs may establish a programme of submissions to the MPA such that details are approved prior to works affecting different species and areas of the sites, shall concern protected species affected directly by works at the Dove’s Nest Farm and Lady Cross Plantation sites, shall detail minimum requirements for mitigating or compensating for effects on protected species, shall require all licences that may be required in respect of effects on or re-location of protected species and their habitat to be obtained and complied with, and shall include but not be limited to consideration of the following <ul style="list-style-type: none"> a. Bats (all species) b. Badger c. Adder d. Common lizard particularly at western side of Lady Cross Plantation e. Other protected reptiles f. Water vole g. Common Crossbill h. Goshawk 	This PSMP relates to reptiles only.

1.1.3 This document only details the works required for the Phase 3 Works at Woodsmith Mine. It does not include any activities at Lady Cross Plantation as these works have been deferred. Updates to this plan will be prepared for subsequent construction phases and following any design or method change. The NYMNPA has confirmed that it supports this approach.

1.1.4 The Phase 3 Works comprise the following:

- General site clearance including demolition of all farm buildings and sheds, and localised tree and scrub clearance, as shown on drawing 40-ARI-WS-71-CI-DR-1051.
- Excavation and construction of the south western extension of the upper tiered working platform at around 203m AOD, as shown on drawing 40-ARI-WS-71-CI-DR-1053.

- Excavation and construction of the Platform for the Construction Welfare Facility, Parking Area and Concrete Batching Plant, as shown on drawing 40-ARI-WS-71-CI-DR-1053.
 - Construction of temporary and permanent soil mounds, including the basal liner for a future storage facility in the northeast corner of the site for non-hazardous non-inert spoil and three topsoil, subsoil and inert material storage bunds in the southwestern area of the site, as shown on drawings 40-ARI-WS-71-CI-DR-1053 and 40-ARI-WS-71-CI-DR-1055, with earthworks volumes presented in 40-ARI-WS-71-CI-DR-1054.
 - Construction of surface water drainage, a temporary surface water attenuation pond and temporary wetland in the southern area and two permanent attenuation ponds and two wetland areas in the north eastern area, as shown on Drawing 40-ARI-WS-71-CI-DR-1050;
 - Construction of a spring and groundwater drainage layer in the north eastern area, discharging into a wetland area, as shown in drawing 40-ARI-WS-71-CI-DR-1080.
 - Installation and commissioning of temporary dewatering as shown in drawing 40-ARI-WS-71-CI-DR-1058.
 - Erection on site of the Concrete Batching Plant as shown in drawing 40-ARI-WS-71-CI-DR-1050, complete with reticulated water supplies and tanks.
 - Construction of the drilling platform and temporary saline lagoon area for the groundwater reinjection well as shown in drawing 40-ARI-WS-71-CI-DR-1057.
 - Establishment of construction welfare and security facilities - complete with hook-up of power, communications & water supplies and new waste water collection facilities as shown on drawing 40-ARI-WS-71-CI-DR-1050.
- 1.1.5 The Phase 3 Works are proposed to start in June 2017. Drawing 40-ARI-WS-71-CI-DR-1050 shows the details of these works.
- 1.1.6 This PSMP provides the necessary information relating to reptiles to guide working practices on site during the Phase 3 Works. This Plan, together with similar PSMPs for bats (a.), badgers (b.) and birds (g. and h.), provides a suite of documents containing the information required by Planning Condition 52 to partially discharge this condition as it relates to the scope of the Phase 3 works. A PSMP has not been provided for water vole (f.) as the ecological surveys undertaken to date have confirmed their absence. This approach has been discussed and agreed with the NYMNPA and Natural England.
- 1.1.7 Survey findings to date confirm that no other protected species are present on site and further PSMPs are not necessary. This has been confirmed by the NYMNPA. Should additional species subsequently be identified, the 'precautionary method of working' would apply and additional plans can be prepared as necessary.
- 1.1.8 Each PSMP has drawn on information available at the time of preparing this document, including that which informed the ES and SEI.
- 1.1.9 This PSMP follows the format of the document submitted for the Phase 2 Works. It will be updated if anything during that Phase requires it. Should the Phase 2 works demonstrate that amendments to the PSMP is required, an updated document will be produced and submitted to the NYMNPA.

2 Legislation afforded to reptiles

2.1.1 Adder, grass snake, slow worm, and common lizard are protected under Schedule 5 (Section 9) of the Wildlife and Countryside Act 1981 (as amended) so that it is illegal to intentionally kill or injure these animals. Their habitats, however, are not protected under this Act. There are only two species of UK reptile (i.e. sand lizard and smooth snake) covered under The Conservation of Habitats & Species Regulations 2010, but neither of these species occurs in North Yorkshire or the North East of England.

2.1.2 **Table 2-1** provides a summary of the relevant legislation afforded to reptiles.

Table 2-1 Summary of legislation affording protection to reptiles

Species	Legislation (England)	Offences	Licensing procedures and guidance (England)
Adder	Wildlife and Countryside Act 1981 S.9(1) (part); S.9(5)	Intentionally kill, injure or take a protected reptile species	No licence is required in England.
Lizard		Sell, offer or expose for sale, or have in possession or transport for the purpose of sale, a protected reptile species, or any part of, or anything derived from, such an animal. Publish or cause to be published any advertisement likely to be understood as conveying buying or selling, or intending to buy or sell, any of these.	However an assessment for the potential of a site to support reptiles should be undertaken prior to any development works which have potential to affect these animals.
Grass snake			
Slow worm			

3 Surveys undertaken to date

3.1 Baseline presence/absence reptile surveys

3.1.1 A reptile presence/absence survey was undertaken during April and May 2012 by Paul Chester & Associates (PCA) following the reptile survey methodology produced by Froglife (1999) and Gent & Gibson (1998), and the advice note produced by the Herpetofauna Groups of Britain and Ireland (HGBI) (HGBI, 1998). Details are contained in the ES/SEI and are summarised in **Section 4.1** of this document.

3.2 Updated presence/absence reptile surveys

3.2.1 Due to the time which had elapsed since the initial surveys in 2012, updated reptile presence/absence surveys were undertaken in 2015 by the Industry Nature Conservation Association (INCA), following the widely accepted methodology of placing artificial refuges, in this case 0.5m x 0.5m mats of roofing felt, in suitable habitat (Sewell *et al.*, 2013). These surveys focused on areas which had either not been covered by the 2012 baseline surveys or due to changes in the project scope and/or where future proposals presented the highest risk to reptiles in areas of highest suitability for reptiles. Details are contained in the ES/SEI and are summarised in **Section 4.1** of this document.

4 Key survey findings

4.1 Baseline presence/absence reptile surveys

4.1.1 Common lizards were the only species found during the 2012 surveys and near to the existing access of Woodsmith Mine. A maximum of four individuals were seen at any one time during the surveys. In the wider local area, occasional common lizard and more rarely occurring adder were recorded from the habitat to the east of Haxby Plantation.

4.1.2 Both adder and common lizard are species which are known to occur on both Sneaton Low Moor and Ugglebarnby Moor. Slow worm is likely to be present along the fringes of this moorland.

4.2 Updated presence/absence reptile surveys

4.2.1 The updated survey showed that the heathland in the previously felled area to the north of Haxby plantation supports a population of common lizard with the maximum of six animals being recorded at one any one time, in mid May 2015. It is considered that the common lizard found here are associated with the drier areas which contain tussocks of purple moor-grass. Given the isolated nature of this habitat it is considered that the common lizards here are a fragmented population that is separated from the main population which is likely to be on moorland which borders Woodsmith Mine to the south.

4.2.2 Only a small number of reptiles were recorded outside of this heathland location during the 2015 survey. A single common lizard was recorded at the proposed new site entrance and four separate observations of a single adder at the existing entrance to Woodsmith Mine in May and two common lizards at the same location in May were also made. Given the proximity of the two entrances to more suitable habitat within the moorland south-west of the B1416 it is considered feasible that reptiles may be regular vagrants from this nearby primary habitat.

4.2.3 The findings of the reptile surveys to date confirm that the Woodsmith Mine site contains suitable foraging, basking and hibernating opportunities for common species of reptiles. Suitable areas of refugia are also present throughout Woodsmith Mine. Therefore it is anticipated that common reptile species will be present within the proposed working areas and as such appropriate measures will be required to ensure compliance with the relevant legislation.

5 Mitigation

5.1 Precautionary method of working

5.1.1 The reptile surveys to date show that the site supports a low level of reptile activity which is attributed to individual animals moving in from the adjacent moorland. As such there is no justification for using reptile exclusion measures for Phase 3 Works. A more proportionate approach would be to carry out destructive searching (once a briefing has been provided) of the Phase 3 working areas and to relocate any reptiles found within the adjacent moorland. A cleared area without possibility of refuge would then be unattractive to reptiles.

Briefing

- 5.1.2 Information in respect of reptiles (i.e. legislation afforded to them, what they look like and what to do should one be encountered) will be provided to the Contractor (NMC) by a suitably qualified ecologist through a toolbox talk. The Contractor will then ensure that any required measures are undertaken and supervised as and where required by a suitably qualified ecologist.

Destructive hand searching

- 5.1.3 As the Phase 3 Works will be undertaken during the reptile active season, any potential refuges (piles of wood or rubble) within the Phase 3 Works area will be dismantled by hand by a suitably qualified ecologist, prior to the works commencing. Once checked all the potential refuge materials within the working area will be removed immediately to eliminate the potential for reptiles to occupy these features during works.
- 5.1.4 Immediately prior to works starting on site, all other suitable habitats (i.e. areas of scattered scrub, hedgerow bases) within the Phase 3 Works site will be checked by an ecologist, by hand, for the presence of reptiles. Work will not be permitted to start at the site until hand searching of the working areas has been completed. Vegetation will be trimmed by the Contractor (NMC), under supervision by the ecologist if necessary, and all debris arising from the removal of vegetation removed from working area(s).

What to do if a reptile is found on site

- 5.1.5 As the Phase 3 Works will be within the reptile active season, should a reptile be uncovered it will be allowed to move away from the area of its own accord. Work will stop in that particular area until the reptile(s) have moved away. Alternatively, or if the reptile does not move away naturally, they will be carefully lifted and placed away from the working area under vegetation by the supervising ecologist. It must be noted that adders are venomous and must only be handled by an ecologist. If adders are identified (or Contractors are uncertain of the species present) works in the vicinity of the reptile should halt and an ecologist should be contacted.
- 5.1.6 The storage of materials and plant in the works area overnight will be minimised where possible, and they will be contained within designated areas. All excavations left overnight will be covered up or if left open, egress points/ramps will be in place from any deep excavations to enable any animals to escape. Anything left on site overnight will be carefully checked by hand before being moved and if a reptile is found advice is to be sought from an ecologist about the best way to proceed.

6 Summary

- 6.1.1 Common lizard was the only species recorded during 2012 surveys. Further surveys were undertaken in 2015. Common lizard and a single adder (dead) were also recorded during the 2015 survey.
- 6.1.2 The Phase 3 Works will take place within terrestrial habitat that is considered to have potential to support common reptile species (e.g. common lizard, adder, grass snake and slow worm), all of which are legally protected species.

6.1.3 The Phase 3 works will take place during the reptile active period. Therefore the following mitigation measures will be employed during the Phase 3 Works in relation to the protection of reptiles:

- Adherence to a Precautionary Method of Working (PMoW) which will involve:
- All staff working on site will be required to attend a tool box talk about the potential presence of reptiles. Elements of this will include what constitutes signs of reptile presence, the probable location of reptiles if present, their legal status and the penalties should a contractor or his agent deliberately injure or kill a reptile;
- Immediately prior to works starting on site, all areas of suitable habitats (i.e. areas of scattered scrub, hedgerow bases) within the works site will be checked by an ecologist, by hand, for the presence of reptiles; and
- Habitat manipulation works will be supervised by a suitably qualified ecologist.
- Should any animals not move of their own accord and therefore require moving, they will be moved by a suitably qualified ecologist.

6.1.4 It is considered that through implementation of the mitigation measures outlined in this document, the site will be managed to ensure reptile population protection and in turn compliance with the legislation afforded to them.

7 References

Gent & Gibson (1998) Herpetofauna Workers' Manual. Peterborough, UK. Joint Nature Conservation Committee

Froglife (1999). Reptile survey, An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife advice sheet 10,

Herpetofauna Groups of Britain and Ireland (1998) Evaluating local mitigation/translocation programmes: Maintaining Best Practice and lawful standards. HGBI advisory notes for Amphibian and Reptile Groups (ARGs)

INCA (2015) The results of a reptile survey at Lady Cross MTS, Lockwood MTS and the Minehead site in 2015

Paul Chester & Associates (2014a) York Potash Project Proposed Minehead Baseline Ecological Surveys, Version 3 09/14

Paul Chester & Associates York (2014b) Potash Project Mineral Transport System (MTS) Baseline Ecological Surveys, Version 2 09/14

Paul Chester & Associates (2015) York Potash Project Supplementary Information (Bats & Reptile Surveys)

Royal HaskoningDHV (2014) York Potash Project Mine, MTS and MHF Environmental Statement, September 2014

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Royal HaskoningDHV (2014) Precautionary Method of Working in Respect of Reptiles (October 2014)

Sewell. D., Griffiths. R.A., Beebee. T.J.C., Foster. J., and Wilkinson. J.W (2013), Survey protocols for the British herpetofauna, Version 1.0.