

Gale Common Extraction Project

Cobcroft Lane, Cridling Stubbs, Knottingley, North Yorkshire WF11 0BB

Environmental Statement Volume II – Technical Appendices

Appendix 7H – Interim Reptile Survey Report



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GLOSSARY

Abbreviation	Description
AOD	Above ordnance datum
ARS	Artificial Refuge Survey
C	Centigrade
CIEEM	Chartered Institute of Ecology and Environmental Management
Defra	Department of Environment, Food and Rural Affairs
ES	Environmental Statement
ha	hectare
m	metre
NERC Act	Natural Environment and Rural Communities Act 2006
PFA	Pulverised fuel ash
SINC	Site of Importance for Nature Conservation
VES	Visual Encounter Survey

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EXECUTIVE SUMMARY

This report provides the results of the reptile survey undertaken in 2019 at the Gale Common Ash Disposal Site, as part of a wider suite of surveys commissioned to determine the baseline ecological value of the Site and to inform ecological impact assessment of the Proposed Development, which comprises the increased extraction of secondary aggregate materials from the Gale Common Ash Disposal Site.

The purpose of the reptile survey and this report is to:

- provide data on the presence/ absence of reptiles within relevant construction and operational areas of the Gale Common Ash Disposal Site;
- provide the above data in a manner that allows the results to be used to support an assessment of relative nature conservation value, including review against relevant criteria (see Section 2 of this report); and
- inform any necessary requirements for impact avoidance, mitigation and/ or habitat compensation to achieve legal compliance.

At the time of submission of this interim report, five of the seven scheduled survey visits had been completed. It is considered that the results of the final two survey visits, once completed in June 2019, will be very unlikely to alter the interim findings of this report. Therefore, this interim report is considered to provide a sound assessment of the relative value of those parts of the Site required for the construction and operation of the Proposed Development.

Only one grass snake was recorded over the five surveys completed to date. Therefore the data indicate that the habitats within the land required for construction and operation of the Proposed Development are not of specific importance for reptiles. Therefore, reptiles are no more than a small-scale and localised constraint to the Proposed Development.

1.0 INTRODUCTION

Background

- 1.1 This appendix describes the approach and findings of the reptile presence/ absence survey undertaken in support of the Ecological Impact Assessment (EclA) of the Proposed Development. The terms of reference used to describe the Proposed Development in this report are consistent with those defined within the main chapters of the Environmental Statement (ES Volume I).

Site Description

- 1.2 The Gale Common Ash Disposal Site is located approximately 700 m east of the village of Cridling Stubbs in North Yorkshire and approximately 25 m south of the M62 motorway. The Gale Common Ash Disposal Site is surrounded by low-lying arable farmland.
- 1.3 The Gale Common Ash Disposal Site comprises approximately 307 ha in total and commenced operation in 1967 when it accepted pulverised fuel ash (PFA) from Eggborough and Ferrybridge Power Stations. The Gale Common Ash Disposal Site was developed in stages. Since the closure of the coal-fired power stations the Gale Common Ash Disposal Site no longer accepts PFA, and has a current planning permission for the extraction of 30,000 tonnes of PFA per year. The PFA has a commercial re-use value in the building industry, and is exported from the Gale Common Ash Disposal Site to customers by road.
- 1.4 Deposition within the Stage I ash disposal area was completed in 1994, with the area being capped and planted with wildflower grassland, woodland, hedgerows and pasture fields along with surface water drains and an attenuation pond. The wildflower grassland areas are cut annually for hay and the pasture fields are grazed at a low intensity by sheep. The height of the restored Stage I landform is approximately 69 m above ordnance datum (AOD).
- 1.5 Stages II and III ash disposal areas and Lagoons C and D are still currently being worked as part of the PFA extraction permission. These areas are dominated by bare ground. However, where semi-natural habitats have become established in these areas (including shallow ephemeral waterbodies) they are transient in nature due to ongoing operations.
- 1.6 An area of land to the south associated with the former Wood Hall moated manor is within the Gale Common Ash Disposal Site boundary but has not been subject to any PFA disposal works. This area comprises agricultural land.
- 1.7 Given the large scale of the Site it has been split into the following broad areas to assist with clarity of reporting:
- Stage I ash disposal area – the restored landform area in the north-eastern part of the Site;
 - Stage II ash disposal area – area in the south-eastern part of the Site to be worked as part of the Proposed Development;
 - Stage III ash disposal area – area in the south-western part of the Site to be worked as part of the Proposed Development;
 - Lagoons C and D – area in the north-western part of the Site to be worked as part of the Proposed Development;
 - main offices – existing buildings, plant, car parking, access to Whitefield Lane and adjacent semi-natural habitats; and
 - the area around Whitefield Lane at Whitley which will be subject to realignment works.
- 1.8 A full description of the Site is provided in Chapter 3: Description of the Site (ES Volume I).

Survey Scope

- 1.9 An initial Phase 1 Habitat survey and scoping of the ecological constraints and opportunities associated with the Site was made by AECOM in March 2019, including identification of requirements for further protected species survey. The findings of the habitat and scoping survey were compiled as a Preliminary Ecological Appraisal (PEA) report (submitted as Appendix 7C of the ES), which should be referred to for a more detailed overview of the wider site conditions and habitats present.
- 1.10 This habitat information was used to identify locations within the potential zone of influence of the Proposed Development that supported conditions potentially suitable for reptiles. The suitable areas of the Site comprised parts of the proposed Stage II and III ash disposal areas, and Lagoons C and D. No suitable habitat conditions were found in other areas likely to be affected by construction and operation of the Proposed Development. This included consideration of the Whitefield Lane re-alignment, which crosses arable farmland unsuitable for reptiles. All potentially suitable areas within the zone of influence of the Proposed Development were taken forward for survey.
- 1.11 The purpose of the reptile survey and this report is to:
- provide data on the presence/ absence of reptiles within relevant areas of the Gale Common Ash Disposal Site;
 - provide the above data in a manner that allows the results to be used to support an assessment of relative nature conservation value, including review against relevant criteria (see Section 2 of this report); and
 - inform any necessary requirements for impact avoidance, mitigation and/ or habitat compensation to achieve legal compliance.
- 1.12 The purpose of this report is to provide baseline technical information only. It does not seek to include recommendations, specify mitigation, or make an ecological impact assessment of the Proposed Development. The ecological impact assessment is provided in the formal EclA provided as Chapter 7: Ecology and Nature Conservation of the ES (Volume I), and this reptile report comprises an appendix to that chapter.

2.0 SURVEY METHODS

Desk Study

- 2.1 A desk study was undertaken as part of the PEA that was completed in advance of the reptile survey and informed the scoping of requirements for further survey.
- 2.2 Desk study results of relevance to the assessment have been carried forward into this report, and where appropriate this data is presented in more detail or re-interrogated for the needs of the current assessment.

Reptile Presence/ Absence Survey

- 2.3 The reptile survey was undertaken following good practice guidance as detailed in Froglife (1999), with reference to Gent and Gibson (1998). The methods employed comprised a combination of Artificial Refuge Survey (ARS) and Visual Encounter Survey (VES). A total of seven visits were undertaken during suitable weather conditions to meet the minimum requirements for determining presence, as detailed in Table 7H.1. Survey times reflect the temperature conditions on each visit.

Table 7H.1 – Dates and Weather Conditions for the Seven Survey Visits

VISIT	SURVEY DATE	MAXIMUM TEMPERATURE	WIND SPEED (BEAUFORT)	CLOUD COVER (OKTAS)	WEATHER	SURVEY TIMES
1	15/04/19	12	2 to 4	3 to 4	Cool, patchy cloud, dry	10:51 – 12:42
2	26/04/19	15	2 to 3	2 to 3	Mild, fine, dry	10:46 – 12:52
3	13/05/19	16	1	0 to 2	Mild, fine, dry	10:15 – 12:00
4	23/05/19	16	1 to 2	3 to 6	Mild, dry, patchy cloud	8:25 – 10:30
5	29/05/19	16	1	3 to 4	Mild, dry, patchy cloud	9:55 - 11:45
6	13/06/19					
7	20/06/19					

Beaufort wind force scale: 0 = no wind, 1 = light air smoke drifts, 2 = light breeze leaves rustle, 3 = gentle breeze small twigs move, 4 = moderate breeze small branches move, 5 = fresh breeze small trees sway, 6 = strong breeze large branches move, 7 = moderate gale whole trees in motion.

Oktas scale: 0 = complete absence of cloud (fine), 1 = cloud amount of 1 eighth or less, but not zero (fine), 2 = 2/8 of sky covered (fine), 3 = 3/8 of sky covered (partly cloudy), 4 = 4/8 of sky covered (partly cloudy), 5 = 5/8 of sky covered (partly cloudy), 6 = 6/8 of sky covered (cloudy), 7 = 7/8 of sky covered (cloudy), 8 = sky completely covered (overcast).

- 2.4 For the purposes of ARS, a total of 182 artificial reptile refuges (roofing felt tiles measuring approximately 0.5 m²) were placed in suitable reptile habitat across six areas identified during the Phase I Habitat survey as providing suitable habitat for reptiles (see Figure 7H.1). They were positioned where they would receive direct sun in the morning to warm up. The refuges were set out on 1st April 2019 and left for a period of two weeks to allow them to 'bed in' prior to the first reptile survey being undertaken. The number of refuges placed in each survey area complied with the published guidance requiring a minimum of 5 to 10 refuges per hectare of suitable reptile habitat (Table 7H.2).
- 2.5 The VES involved surveyors slowly walking along predetermined transects between the locations of the artificial refuges and scanning the vegetation present for reptiles. The walked

transects were designed to include, where possible, a range of suitable vegetation types, south facing banks and suitable natural and artificial refuges and basking areas.

- 2.6 A total of seven survey visits will be undertaken between April and June 2019 (five survey visits have been completed at the time of writing this interim report), during suitable weather conditions (ideally with temperatures between 9 and 20°C, and sunny with no rain or strong winds) (Froglife, 1999). The survey was undertaken by two ecologists to ensure all mats were inspected on each visit while temperatures and weather conditions remained optimal for survey.

Table 7H.2 – Summary of the Number of Artificial Refuges Deployed

SURVEY AREA	SIZE OF SURVEY AREA	NUMBER OF REFUGES DEPLOYED	MEAN NUMBER OF REFUGES PER HA
1	2.4 ha	36	15
2	1.0 ha	32	32
3	1.5 ha	34	22
4	2.5 ha	38	15
5	0.7 ha	20	20
6	0.8 ha	22	22

Nature Conservation Evaluation Approach

- 2.7 Evaluation of the relative nature conservation value of the identified ecological features within a site (encompassing nature conservation designations, ecosystems, habitat and species) is required to inform EclA. This report presents the evaluation of reptiles and the impact assessment is presented in Chapter 7: Ecology and Nature Conservation (ES Volume I).
- 2.8 The method of evaluation that has been utilised has been developed with reference to the Chartered Institute of Ecology and Environmental (CIEEM) *Guidelines for Ecological Impact Assessment in the UK and Ireland – Terrestrial, Freshwater and Coastal and Marine – Second Edition* (CIEEM, 2018). These give advice on scoping and carrying out environmental assessments and place appraisal in the context of relevant policies. Data received through consultation, desk-based studies and field-based surveys are used to allow ecological features of nature conservation value or potential value to be identified, and the main factors contributing to their value described and related to available guidance. These data can also be used to identify other relevant values e.g. socio-economic or ecosystem services values, but this is beyond the remit of this report and requires the involvement of other relevant specialists.
- 2.9 The value of a faunal species, such as reptiles, may relate, for example, to geographic location (species may be rare and more valued towards the edge of their geographic range), the extent to which the species is threatened throughout its range, or to its rate of decline. Where confirmed as present, the value of the reptile population associated with the Site has been defined with reference to the geographical level at which it is considered to matter. This assessment has been made with reference to published guidance and criteria where available e.g. criteria to assess relative value within the context of North Yorkshire are given in North Yorkshire Site of Importance to Nature Conservation (SINC) Panel (2017).

Limitations

- 2.10 There are no limitations to the survey work undertaken. The surveys were completed in appropriate weather conditions and were spread across the spring active season.
- 2.11 Survey refuges were set in all locations in exceedance of the minimum survey effort of 5 to 10 refuges per hectare, providing a safeguard against any losses of mats over the survey period, and maximising the likelihood of reptiles being detected.

3.0 LEGISLATION, PLANNING POLICY AND RELATED GUIDANCE

- 3.1 There are four widespread species of British native reptile, and these are the only native species that occur in Yorkshire. These species are adder (*Vipera berus*), grass snake (*Natrix helvetica*), common lizard (*Zootoca vivipara*) and slow worm (*Anguis fragilis*).
- 3.2 The following wildlife legislation, planning policy and guidance is specifically relevant to the identification and assessment of potential constraints posed by the presence of the reptile species listed at paragraph 3.1 above (referred to below as ‘the named reptile species’). At this stage of assessment, this legislation, policy and guidance is primarily listed to demonstrate that an appropriate level of survey and assessment has been undertaken to meet likely data requirements for future decision-making regarding these material considerations.
- 3.3 Wider relevant biodiversity legislation, policy and guidance is detailed in Appendix 7A Legislation and Policy (ES Volume II).
- 3.4 The named reptile species are afforded legal protection through their inclusion on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). It is an offence under this legislation to intentionally or recklessly kill or injure these species. However, as they are not European protected species their habitat does not receive legal protection.
- 3.5 The named reptile species are also listed as ‘Species of Principal Importance for Nature Conservation in England’ pursuant to Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Section 40 of the NERC Act requires that local planning authorities have regard to the conservation of biodiversity in England, when carrying out their normal functions.
- 3.6 The Government standing advice (Natural England and Department of Environment, Food and Rural Affairs (Defra), 2015) is to guide decision-makers on the determination of proposals with potential to affect protected species such as reptiles. The guidance sets out responsibilities and minimum requirements for survey and mitigation, including requirements for reptiles.

4.0 SURVEY RESULTS

Desk Study

- 4.1 The desk study did not return any records of reptiles within 1 km of the Site.
- 4.2 Staff working at the Gale Common Ash Disposal Site identified the likely presence of grass snake within the Gale Common Ash Disposal Site, but it was reported that there had not been any sightings for several years.

Presence/ Absence Survey

- 4.3 At the time of issue of this interim report, five of the seven scheduled reptile surveys had been completed.
- 4.4 A single grass snake was recorded on Visit 2 to survey area 6 which is located within Lagoons C and D (as shown on Figure 7H.2). No other records of grass snake or other reptiles were made over the course of the five survey visits that have been completed to date.

5.0 CONCLUSIONS

- 5.1 The results of the five reptile surveys completed to date indicate that the habitats required for the construction and operation of the Proposed Development are of low importance for reptiles, as only a single grass snake was recorded over the survey period. There is no reasonable likelihood of the results of the final two survey visits scheduled for June 2019 altering this assessment.
- 5.2 Given the survey results, the grass snake population in the zone of influence of the Proposed Development (see paragraphs 7.3.11-7.3.12 in Chapter 7: Ecology and Nature Conservation, ES Volume I) is of no greater than local nature conservation value. Accordingly, grass snake is currently only a relatively minor constraint to the Proposed Development. Welfare requirements specified in relevant legislation will need to be met, but there will be no requirement for reptile translocation or the provision of alternative habitats.

6.0 REFERENCES

Froglife (1999) Reptile survey: *An introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10.* Froglife, Halesworth

Gent, T. and Gibson, S. (1998) *Herpetofauna Workers' Manual.* JNCC, Peterborough

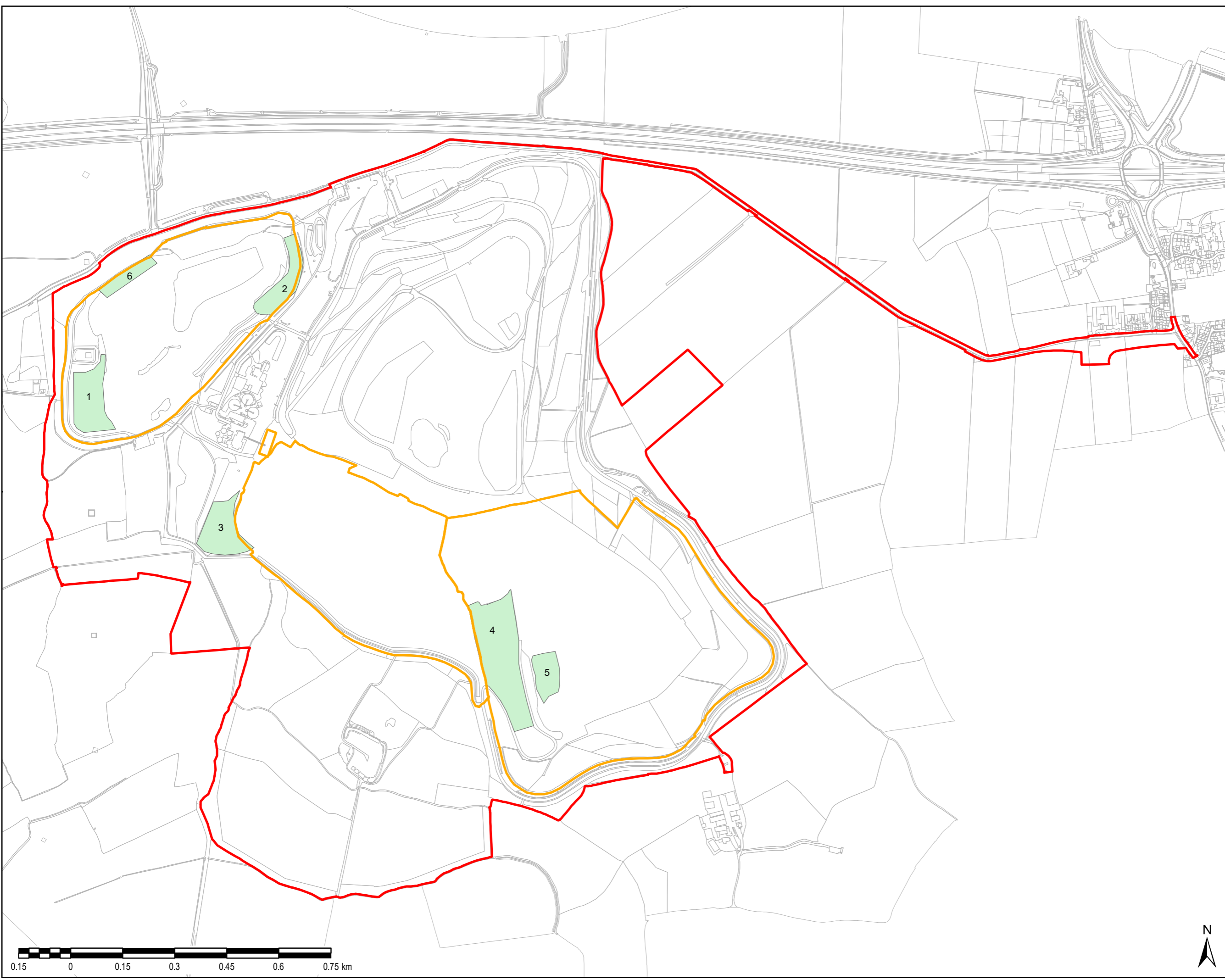
Natural England and Defra (2015) *Reptiles: Survey and Mitigation for Development Projects.* <https://www.gov.uk/guidance/reptiles-protection-surveys-and-licences> [accessed April 2019]

North Yorkshire SINC Panel (2017) *Sites of Importance for Nature Conservation in North Yorkshire, Guidelines for Site Selection.* <http://www.neyedc.org.uk/wp-content/uploads/2018/04/SINC-Guidelines-V3.0-December-2017.pdf> [accessed May 2019]

FIGURES

THIS DRAWING IS TO BE USED ONLY FOR THE PURPOSE OF ISSUE THAT IT WAS ISSUED FOR AND IS SUBJECT TO AMENDMENT

- Proposed Development Boundary
- Proposed Working Area
- Reptile Mats



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Purpose of Issue
ENVIRONMENTAL STATEMENT

Client
EP UK INVESTMENTS

Project Title
GALE COMMON EXTRACTION PROJECT

Drawing Title
REPTILE SURVEY LOCATIONS

Drawn BO	Checked AR	Approved DB	Date 06/06/2019
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2 City Walk
Leeds LS11 9AR
Telephone (0113) 391 6800
www.aecom.com



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