Preliminary Environmental Information Report

Volume III - Appendices

Appendix 12E: Reptile Survey

The Infrastructure Planning (Environmental Impact Assessment) Regulations 2017 (as amended)

Prepared by: AECOM

OGCI Clean Gas Project

Redcar

Reptile Survey

November 2018

Report reference	132-12
Revision	2
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Approved by	Andrew Westgarth
Issue date	12th November 2018

This report is valid for a period of 12 months from the issue date.

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Contents

1 Introduction

1.1.1.1 This report presents the results of a presence/absence Reptile Survey undertaken on land at Redcar Steel Works, Redcar, North Yorkshire, TS10 5BE. The survey was completed to provide supporting information for a planning application for the proposed development at the site. The Local Authority for the application site is Redcar and Cleveland Borough Council.

1.1.1.2 The area surveyed (see Figure 1) is centred on OS grid reference NZ 5726 2457 at an altitude of ~7 m above sea level and is positioned on the northern edge of the town of Redcar. The survey area is located 3.8 km to the north-east of Middlesbrough and 8.3 km to the north of Guisborough. The North Sea coast is approximately 1.65 km to the north-east of the site with the River Tees situated approximately 2.13 km to the west.

1.1.1.3 The aim of the survey was to determine the presence or likely absence of reptiles at the site and an indication of the size of any population present (see Appendix A for legislative context).

2 Site Habitat Description

2.1 Overview

2.1.1.1 The Survey Area is split into 4 plots (A - D) divided across what are commonly referred to as the SSI (an abbreviation of the now disused Sahariviya Steel Industries site) land, which is the proposed development area for a gas power generation plant; and an adjacent area of land referred to as "Teardrop", through which the installation of some ancillary infrastructure into the wider area is proposed. These areas are shown on Figure 1.

2.1.1.2 All parts of the Survey Area comprise industrial made ground characterised by largely open, unshaded habitats broken up by man-made bunds, other relief features and scattered low growing willow *Salix* sp. and bramble *Rubus fruticosus* agg. scrub. Habitats within the Survey Area are therefore exposed to the effects of adverse weather conditions and the desiccating effects of prevailing winds, and are readily accessible to airborne and other predators. Public access is not permitted to the site, which is regularly patrolled by security staff. Site staff are known to feed the local foxes *Vulpes vulpes* on a regular basis and this maintains much greater fox numbers than would otherwise be expected in the locality.

2.1.1.3 A detailed botanical assessment and habitat survey can be found in the Preliminary Ecological Appraisal (PEA) Report produced by AECOM (2018)[1].

2.2 Survey Plot A

2.2.1.1 Survey plot A comprises a perimeter bunded area of relatively sheltered rank ephemeral grassland over a free-draining substrate of at least partially industrial origins. The sward height often exceeds 500mm and is dominated by common couch grass *Elytrigia repens*, cocks-foot *Dactylis glomerata*, black knapweed *Centaurea nigra* and most noticeably teasel *Dipsacus* sp. The margin at the base of the bund hosts a variety of encroaching willow *Salix* sp. and ubiquitous bramble *Rubus fruticosus* agg. Roe deer *Capreolus capreolus* graze the scrub here and this maintains the openness of the habitats, while moderate levels of grazing by rabbits *Oryctolagus cuniculus* help to control grassland sward height.

2.3 Survey Plot B

2.3.1.1 Survey plot B is adjacent to a supply railway line. This area was historically cleared to accommodate the railway and is now dominated by rank grassland and bramble. It is an open industrial landscape with large areas of support ballast and smaller spent quantities of waste covering the area. The plot is on a south-west facing slope at a 5 – 10 degree angle. It is heavily rabbit grazed and dominated by bramble and coarse grass species.

2.4 Survey Plot C

2.4.1.1 Survey plot C is a large open area containing numerous raised industrial workings, which provide shelter and protection from prevailing winds. This has created suitable conditions for the development of a matrix of willow and thorn scrub, open rank grassland, tall herb ephemeral communities, bare ground and closely grazed rabbit turf. The Fleet watercourse flows along the southern edge of this area. Along this boundary the habitat changes to luxuriant macrophytic vegetation.

2.5 Survey Plot D

2.5.1.1 Survey plot D is similar to survey plot C but with only one main protective relief feature adjacent to the road boundaries on the western and southern perimeters. Willow scrub is developing in these

[1] AECOM (2018). OGCI – Clean Gas: *Preliminary Ecological Appraisal (PEA) Report.* Technical report to OGCI, November 2018.

more sheltered areas. There is less habitat variability compared to Survey Plot C. Evidence of grazing Roe Deer was clearly visible in this survey plot.

3 Methodology

3.1 Reptile Surveys

3.1.1.1 Presence/likely absence surveys for reptiles were undertaken during suitable weather conditions between August and October 2018 in accordance with standard guidelines[2] [3] [4]. The reptile surveys covered all areas of the site considered to offer potentially suitable habitat[5] for reptiles.

3.1.1.2 On 8th August 2018, 153 artificial refugia consisting of roofing felt 'tiles', each approximately 1.0m x 1.0m in size were placed throughout the suitable habitat within the site (38 in Plot A, 25 in Plot B, 50 in Plot C and 40 in Plot D. Figure 1 shows the location of the survey plots and the distribution of refugia tiles within them.

3.1.1.3 The refugia tiles were left to settle for a minimum period of 14 days before being checked for the first time. Each tile was checked 7 times during suitable weather conditions. On each survey occasion, each tile was inspected for the presence of live reptiles and signs of reptiles such as sloughed skin. In addition, refugia already present on site (e.g. logs and discarded tyres) were also inspected for reptiles and signs of reptiles and any incidental observations of reptiles were recorded. Full survey dates and weather conditions are provided within Table 1.

3.1.1.4 Each refugia check was conducted during the following conditions:

- Time: conducted between 07:00 and 12:00;
- Air temperature: 10°C - 18°C;
- Wind: still to moderate (equivalent to Beaufort 4; 13 - 17mph), and
- Rain: no or light rain only at time of survey; surveys between periods of heavy rain (when all other conditions are suitable) are also acceptable.

Table 1. Reptile Survey Conditions and Results

Visit	Date and time	Weather conditions	Limitations
1	21st Aug 2018. 9am	Light Drizzle, Overcast, 18°C, wind Bft 1	Wet Mats, drizzle and wind.
2	4th Sept 2018. 9am	Dry, Overcast, 13°C, wind Bft 3.	Wet mats and wind.
3	11th Sept 2018. 9am	Dry, Sunny spells, 13°C, wind Bft 2.	None.
4	18th Sept 2018. 9am	Dry, Overcast, 12°C wind Bft 2-3.	None.
5	25th Sept 2018. 9am	Dry, Sunny, 10°C, wind Bft 1.	None.
6	2nd Oct 2018. 9am	Dry, Overcast with sunny spells, 13°C, wind Bft 1.	None.
7	9th Oct 2018. 9am	Dry, Overcast, 13°C, wind Bft 1.	None.

[2] Froglife (1999). Reptile survey; an introduction to planning, conducting and interpreting surveys for snake and lizard conservation. Froglife Advice Sheet 10. Froglife, Halesworth.

[3] Gent T and Gibson S eds (2003). Herpetofauna Workers Manual. JNCC, Peterborough.

[4] Natural England (2011). Natural England Technical Information Note TIN102: Reptile Mitigation Guidelines. Natural England, Peterborough. (Note this guidance was published and subsequently withdrawn in September 2011).

[5] Suitable Habitat for reptiles: south facing banks and hedgerows for hibernation and basking sites, piles of rock / debris for shelter and basking sites, permanent varied grassland structure and a healthy understorey to provide food and burrowing for lizards. (Gent, A.H & Gibson, S.D, eds. 1998. *Herpetofauna works manual*. Joint Nature Conservation Committee.)

3.2 Personnel

3.2.1.1 All survey work was undertaken by Andrew Westgarth MCIEEM CEnv and Thomas McQuillan MCIEEM.

3.3 Limitations

3.3.1.1 Early and late-season surveys (e.g. April/May and September/October) are both considered optimal periods for reptile surveys in England; therefore the surveys were conducted during suitable weather conditions during the reptiles' active season. The weather conditions on the first two visits were moderately good in terms of temperature, rain and wind. The remaining 5 visits were undertaken during good temperatures and weather conditions (intermittent sunshine, after rainfall, temperatures between 10°C and 18°C with low winds). All surveys were undertaken at the optimum time of day for the summer/autumn period.

3.3.1.2 There were no access restrictions or significant limitations to the surveys.

4 Results

4.1.1.1 As shown in Table 2, 1 common lizard *Zootoca vivipara* was observed in Section C during the survey on the 2nd October 2018. It was observed on top of a felt located to the south-west of the largest building in Section C at approximate NGR NZ 5736 2452 (see photographs in Appendix B).

4.1.1.2 The site holds suitable habitat for both adder *Vipera berus* and grass snake *Natrix natrix,* however no evidence of these reptile species was found during the survey and it is considered that the surveys would have been sufficient to detect them, had they been present.

Table 2: Survey Results

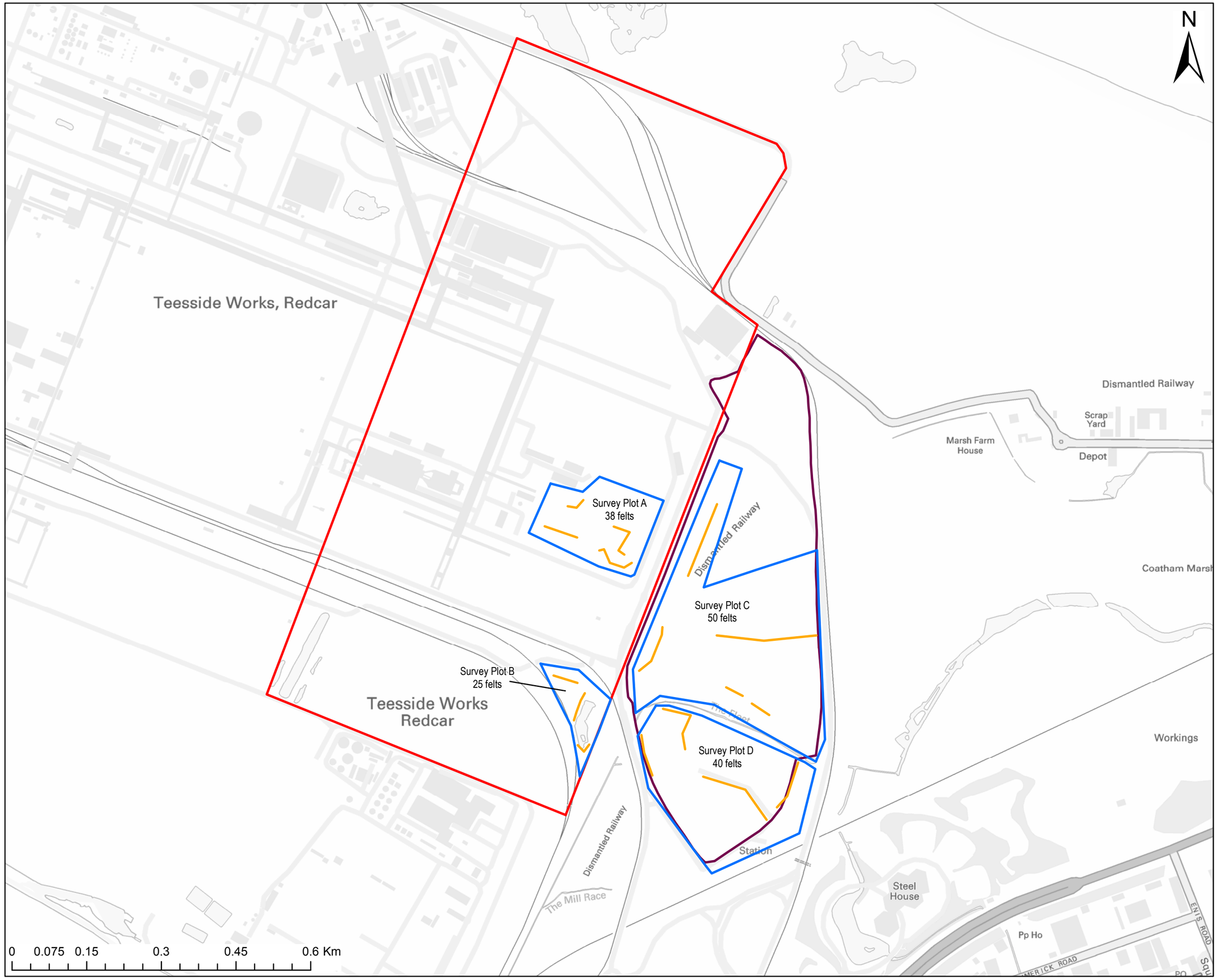
Visit	Date	Observations
1	21st Aug 2018.	No reptiles. Multiple ant nests in sections A, B, C and D. Brown hare *Lepus europaeus* spotted in Section B.
2	4th Sept 2018.	No reptiles. Ants present under mats in section B.
3	11th Sept 2018.	No reptiles. Ants under mats in sections A & B.
4	18th Sept 2018.	No reptiles. Common Toad *Bufo bufo* & European Frog *Rana temporaria* in Section D. Multiple ant nests in sections A, B, C and D.
5	25th Sept 2018.	No reptiles. Multiple ant nests in sections A, B, C and D.
6	2nd Oct 2018.	1 Common Lizard on top of felt in section C.
7	9th Oct 2018.	No reptiles. Brown Hare and 5 Roe Deer observed in section A. Fox and Common Toad in section B.

5 Conclusions

5.1.1.1 Based on the results of the reptile surveys presented in this report it is considered that sufficient survey effort has been undertaken in suitable conditions to determine that a low population of common lizard is present at the site and that no other reptile species are present.

6 Figures

Figure 1: Survey Area and Reptile Felt Locations



Filename: K:\Newproje\60559231 - Clean Gas Project\GIS\02_Maps\Survey Area and reptile felt locations.mxd

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Project Title:

CLEAN GAS PROJECT

Client:

OGCI
CLIMATE INVESTMENTS

Location Inset:

LEGEND

- SSI Boundary
- Teardrop Boundary
- Reptile Survey Plot
- Reptile Felt

Copyright:

AECOM Internal Project No:

60559231

Drawing Title:

SURVEY AREA AND REPTILE FELT LOCATIONS

Scale at A3: 1:7,000

Drawing No:			Rev:
FIGURE 1			01
Drawn:	**Chk'd:**	**App'd:**	**Date:**
AG	RW	RW	16/11/18

Appendix A. Legislation Context

Reptiles

All 'common' reptiles in the UK, i.e. slow-worm *Anguis fragilis*, common lizard *Zootoca vivipara*, adder *Vipera berus* and grass snake *Natrix natrix*, are listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) in respect of Sections 9(1) and 9(5), which makes it an offence to intentionally kill, injure or sell the animals. All four of these species are also identified as UK Biodiversity Action Plan (BAP) Priority Species and are also listed on Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006 as Species of Principal Importance for the purpose of conserving biodiversity.

Common lizard and slow worm can also be regarded as Local Biodiversity Action Plan (LBAP) priority species[6].

Licences are available from Natural England to allow activities that would otherwise be an offence for specific purposes including conservation or scientific/educational purposes. However, there are no licensing purposes that explicitly cover development activities. The Act provides a legal defence where the action is the incidental result of an otherwise lawful operation and could not reasonably have been avoided.

[6] Both species are included in *Priority Habitats and Species in the Tees Valley – Update January 2012* (Tees Valley Biodiversity Partnership, 2012). LBAPs are no longer used as a formal expression of delivery of biodiversity targets, but identify sub-regional priorities for nature conservation and propose agreed actions to conserve/maintain/enhance/increase local priority species and habitats.

Appendix B. Photographs

Photograph 1. Common Lizard (Found 2nd August 2018in Survey Plot C).

Photograph 2. Location of felt on which the common Lizard was found on 2nd August 2018 (supplied by David Bradley, South Tees Site Company Ltd., 2018).