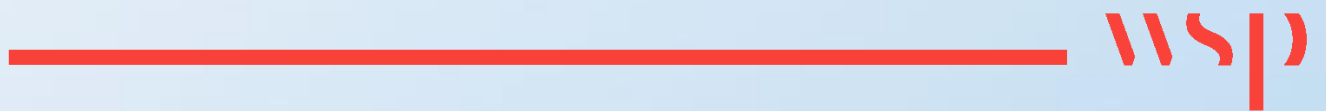


Appendix 5.4

Reptile Survey Report





C.GEN Killingholme Limited

NORTH KILLINGHOLME POWER PROJECT

Reptile Survey Report





C.GEN Killingholme Limited

NORTH KILLINGHOLME POWER PROJECT

Reptile Survey Report

PUBLIC

PROJECT NO. 70055743

OUR REF. NO. REP

DATE: MAY 2020

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EXECUTIVE SUMMARY

WSP UK Limited (hereafter referred to as 'WSP') was commissioned by C.GEN Killingholme Limited (hereafter referred to as C.GEN) to undertake a reptile survey on land in North Killingholme, North Lincolnshire (National Grid Reference: TA 16141 20137); hereafter referred to as 'the Site' (see Figure 1). The purpose of this survey was to update the ecological baseline of the Site to support an amendment to the Development Consent Order (DCO) of the North Killingholme Power Project, granted in 2014. The project proposals included the construction and operation of a new 470 megawatt electrical (MWe) thermal generating station and associated development (hereafter referred to as the Proposed Scheme). The amendment includes a non-material change application to extend the lifetime of the DCO. In order to ensure the consent remains fit for purpose, other minor modifications to the Order are proposed. However, no changes are sought to the technology used, modes of operation or the Order Limits.

To support the original DCO application, a series of reptile surveys were undertaken on the Site in 2011. No reptiles or signs of reptiles were recorded during these surveys. During the Preliminary Ecological Appraisal (PEA) undertaken in May 2019 to support the amendment to the DCO, suitable habitat for supporting reptiles was identified on the Site. Suitable habitat included scattered and dense scrub, a mosaic of tall herb and fern and scrub interfaces, waterbodies, south facing slopes and waste material that could be used for refuge and basking to the west of the Site.

50 refugia were installed within suitable habitat on the Site on the 4th of September 2019 (see Figure 2) and were removed at the end of September 2019. The refugia were checked for reptiles seven times between the 17th of September and the 27th of September 2019.

No reptiles or evidence of reptiles was recorded on the Site; therefore, reptiles are considered likely to be absent from the Site or present in very low numbers.

1 INTRODUCTION

1.1 PROJECT BACKGROUND

- 1.1.1. WSP UK Limited (hereafter referred to as 'WSP') was commissioned by C.GEN Killingholme Limited (hereafter referred to as C.GEN) to update ecological baseline data in relation to a proposed amendment to the Development Consent Order (DCO) granted for the North Killingholme Power Project in 2014. The project proposals include the construction and operation of a new 470 megawatt electrical (MWe) thermal generating station and associated development (hereafter referred to as the Proposed Scheme).
- 1.1.2. The proposed amendments to the DCO includes a non-material change application to extend the lifetime of the DCO, initially granted in 2014. The Order limits, proposed plant and generation equipment, remains the same as described in the Environmental Statement (referred to as the Principal Project Area). The Principal Project Area is centred at National Grid Reference: TA 157 198); and hereafter referred to as the 'Site' (displayed on **Figure 1**).

1.2 ECOLOGICAL BACKGROUND

- 1.2.1. A Preliminary Ecological Appraisal (PEA) of the Site was carried out in May 2019 (WSP, 2019). The survey covered the entire Site including boundary features and was carried out by surveyors who are members of CIEEM and have experience of completing a PEA of sites containing similar habitat types. Suitable habitat for supporting reptiles was identified during the PEA. Suitable habitat included scattered and dense scrub, a mosaic of tall ruderal and scrub interfaces, waterbodies, south facing slopes such as earth banks and waste material that could be used for refuge and basking. These habitats were confined to the west of the Site.
- 1.2.2. BSG Ecology Ltd. (hereafter referred to as BSG Ecology) undertook a reptile survey within the same area in 2019 to support the proposed 'Killingholme Car Terminal' project (BSG Ecology, 2019), which is located to the west of the Site. The reptile survey boundary used by BSG Ecology overlaps with the Site. No reptiles or signs of reptiles were recorded during these surveys.
- 1.2.3. An extended Phase 1 habitat survey of the Site was undertaken by Parsons Brinckerhoff in 2011 to support the original Development Consent Order (Parsons Brinckerhoff, 2011^a). Suitable habitat for reptiles was identified during the extended Phase 1 habitat survey and subsequent reptile surveys were carried out within these areas (Parsons Brinckerhoff, 2011^b). No reptiles or signs of reptiles were recorded during these surveys.

1.3 BRIEF AND OBJECTIVES

- 1.3.1. C.GEN commissioned WSP UK Ltd to complete a reptile survey in accordance with good practice guidance (Froglife, 1999 and Gent and Gibson, 1998) to:
- Establish whether reptiles were present or likely absent from the Site;
 - Determine, if present, which species are present and the distribution of these species; and
 - If present, evaluate the Site's value for reptiles
- 1.3.2. The results of this survey and conclusions are included within this report.

2 METHODS

2.1 OVERVIEW

- 2.1.1. The reptile survey was carried out to determine presence/likely absence of reptile species at the Site. The survey comprised two main elements; the checking of artificial refugia and visual observation of habitats and natural refugia present. This survey comprised seven survey visits conducted in September 2019.
- 2.1.2. The reptile survey to determine presence/likely absence was completed with regard for guidance within the Herpetofauna Workers' Manual (Gent and Gibson, 1998) and the methodology within Froglife's Reptile Survey Advice Sheet 10 (1999).

2.2 REPTILE PRESENCE/LIKELY ABSENCE SURVEY

- 2.2.1. The survey comprised seven survey visits to the Site, each incorporating two elements:
- Survey of artificial refugia; and
 - Visual observation of habitats and natural refugia present.
- 2.2.2. Fifty refugia were installed within suitable habitat for reptiles on 4th of September 2019 and allowed to bed down for two weeks prior to the beginning of the survey visits.
- 2.2.3. A mixture of materials sized approximately 0.5m x 0.5m were used as artificial refugia, these included bitumen felt, and corrugated metal. Refugia were sited in suitable basking spots, close to cover, within habitat parcels that provided suitable conditions for reptiles.
- 2.2.4. Suitable reptile habitat totalled approximately 3.4 hectares (see **Figure 2**); by using 50 refugia the density exceeded the minimum density as recommended by good practice guidance (Froglife, 1999). This guidance states the number of refugia used '*will depend on many factors, such as likelihood of disturbance, size of site and what the survey is attempting to achieve*' and recommends a minimum of 5-10 refugia per hectare for 'general survey purposes'. Although the Froglife guidance forms the current, recognised, good survey practice, it should be noted that it is not specifically designed for use in demonstrating absence of reptiles from a development site, rather the focus is on identifying key reptile sites and increasing recording of reptiles. For this reason, the density of refugia has been increased for this survey to increase confidence in results, should likely absence be concluded.
- 2.2.5. Reptiles are ectothermic animals, deriving their body heat from the external environment. Therefore, the timing of the survey visits was dictated by weather conditions. All surveys were completed within the appropriate season (March to October) and within the appropriate ambient air temperature range (10-19°C). As far as possible, surveys were undertaken on sunny days with low cloud cover and little wind to maximise the probability of recording reptiles, should they be present. Where ambient air temperatures were towards the upper end of the temperature range, days of higher cloud cover were targeted.

2.3 DATES OF SURVEY AND PERSONNEL

- 2.3.1. The reptile survey was completed by a competent surveyor with 3 years' experience of ecological survey, including reptile survey experience. The surveyor therefore had a thorough understanding of the ecology of widespread native reptile species.

2.3.2. Surveys were completed on the following dates:

- 17/09/2019
- 18/09/2019
- 19/09/2019
- 20/09/2019
- 25/09/2019
- 26/09/2019
- 27/09/2019

2.4 EVALUATION

2.4.1. The value of the Site for reptiles was evaluated using the CIEEM guidance (CIEEM, 2016). This guidance recommends that valuation of site importance is made with reference to a geographical framework, e.g. a site is of local, regional, national value etc. To inform the assessment in this report the number of species recorded, and peak counts of adults were considered in the context of the distribution and abundance of each species locally and nationally, the quality of habitat present and the abundance of such species on other sites.

2.4.2. Froglife guidance (1999) was used to inform the population size class estimates. However, due to certain limitations of the guidance, which does not include consideration of variables such as site size, whether both visual observation and refugia survey contribute to peak counts and individual reptile species ecology, professional judgement has been applied to avoid misinterpretation of data.

2.5 NOTES AND LIMITATIONS

2.5.1. All seven survey visits were conducted over a short time window due to the timescales required and the need deliver surveys within the appropriate seasonal window. Surveys between the 18th and 20th September noted construction works operating near to where the reptile refugia were deployed. This would have caused vibration and potentially disturbance to any reptiles present in the vicinity.

2.5.2. These factors are not considered to have had a significant effect on the outcome of the reptile surveys. This is due to the Site's industrial nature with ongoing disturbance for existing use and the combination of historic and current survey information available from third party sources which suggests an absence of reptiles.

3 RESULTS AND EVALUATION

3.1 OVERVIEW

3.1.1. As no reptiles were recorded on any survey visit under refugia or direct observation, it is likely that reptiles are absent from the Site. If present, reptiles will be present in very low numbers. **Table 3-1** below summarises the survey results during each survey.

3.2 RESULTS OF REPTILE SURVEY

3.2.1. No reptiles or signs of reptiles were recorded during the seven surveys visits.

3.2.2. Weather conditions during surveys ranged between 13 °C and 20 °C in temperature, with cloud cover of between 0 and 3 oktas; Survey information and weather conditions are detailed in the table below.

Table 3-1 - Survey Information and Weather Conditions

Survey Visit Number		1	2	3	4	5	6	7
Date		17/09/19	18/09/19	19/09/19	20/09/19	25/09/19	26/09/19	27/09/19
Start	Time	09:30	10:30	16:15	10:20	10:00	10:00	9:45
	Air Temp. (°C) (shade)	13	17	20	18	17	19	15
	Cloud Cover (oktas)	2	3	0	2	8	6	7
	Wind Speed (Beaufort scale)	4	3	2	2	1 - 2	1 - 2	3
Finish	Time	10:45	12:45	18:00	11:45	11:15	11:15	11:10
	Air Temp. (°C) (shade)	14.7	18.5	17	20	16	20	15
	Cloud Cover (oktas)	2	2	0	1	8	5	6
	Wind Speed (Beaufort scale)	2	2	3	3	1 - 2	1 - 2	2
Reptiles Recorded	0	0	0	0	0	0	0	0
Description / Notes (Rain measurement based on WSP scale*)	Rain 0 throughout survey.	Rain 0 throughout survey Limitation – construction worker operating loud machinery close to the refugia creating vibrations	Rain 0 throughout survey Limitation – construction worker operating loud machinery close to the refugia creating vibrations	Rain 0 throughout survey Limitation – construction worker operating loud machinery close to the refugia creating vibrations	Rain 0 throughout survey Limitation – construction worker operating loud machinery close to the refugia creating vibrations	Rain 0 at the beginning and 1 at the end Limitation – Scattered showers throughout the survey, but intermittent breaks	Rain 0 throughout survey	Rain 0 throughout survey

*Rain: 0=none, 1=drizzle, 2=light, 3=moderate, 4=heavy

3.3 EVALUATION OF THE SITE FOR REPTILES

- 3.3.1. Part of the Site supports habitat interfaces (particularly in the west) that could provide numerous opportunities for reptiles such as basking and refuge. Hibernacula and breeding sites such as discarded rubbish, brash and compost heaps are also present. These opportunities and the habitat mosaics that they could exist in, make up less the 20% of the Site. The Site is predominantly hard standing and is largely unsuitable for reptiles. Findings from both 2011 and 2019 surveys suggest that the Site is unlikely to support reptiles.

3.4 ASSESSMENT AGAINST PREVIOUS FINDINGS

- 3.4.1. The habitats within the Site have not undergone a significant change and the Site remains largely the same as per the original reptile survey in 2011.
- 3.4.2. The updated findings of this reptile survey uphold the previous survey results obtained in 2011. No reptile species were recorded during the 2011 surveys.
- 3.4.3. In addition, no reptiles were recorded during the surveys carried out by BSG Ecology in 2019. Furthermore, there are no desk study records of reptiles within 2km of the Site during the past 10 years. The collated updated information indicates that the site is unlikely to support reptile populations. This assessment has not changed since the original assessment documented in the ES, submitted in 2014.

4 IMPLICATIONS FOR DEVELOPMENT

4.1 OVERVIEW

- 4.1.1. The survey results indicate that reptiles are likely absent from the Site, therefore legal or planning constraints in relation to reptiles are unlikely to apply. The legislation and national planning policy listed beneath is included for information only.

4.2 LEGAL COMPLIANCE

- 4.2.1. Native, widespread reptile species (common or viviparous lizard, adder, grass snake and slow worm) are partially protected under Schedule 5 of The Wildlife and Countryside Act (1981), under part of Section 9(1) and all of Section 9(5). As such it is an offence to:
- *'Intentionally or recklessly kill or injure' an individual of these species; or*
 - *'Sell, offer or expose for sale, or [have in] possession or transport for the purpose of sale, any live or dead [individual] or any part of, or anything derived from' an individual of these species'.*
- 4.2.2. All species of reptile are also listed as a Species of Principal Importance (SPI) for the Conservation of Biodiversity in England in accordance with Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. Under Section 40 of the NERC Act (2006) public bodies, including local planning authorities have a duty to have regard for SPI when carrying out their functions.

5 CONCLUSIONS

- 5.1.1. Suitable reptile habitats identified on-site include dense and scattered scrub, tall ruderal, semi-improved grassland, waterbodies (including ponds and standing water ditches) and associated marginal vegetation. The Site also comprises south facing slopes, earth banks, mounds of soil and a mosaic of habitat interfaces such as scrub, reedbed and grassland. The habitats located to the west of the Site were considered suitable for supporting reptile populations during the initial assessment in the PEA.
- 5.1.2. No reptiles or evidence of reptiles was recorded during the seven survey visits of the Site in September 2019 by WSP. Surveys of part of the Site were completed by BSG Ecology in May and June 2019, also with no evidence of reptiles included. No records of reptiles were identified within 2km of the Site in biological records obtained during the desk study, dating from the last 10 years. The results of the survey and assessment for reptiles align with the survey results collected in 2011.
- 5.1.3. The survey results indicate that reptiles are likely absent from the Site or if present, present only in very low numbers. The assessment in the ES submitted in 2014 also found that reptiles were likely absent from the Site, with no reptiles recorded during the targeted surveys to inform the ES. The outcome of the 2019 assessment for reptiles therefore remains the same as per the original assessment presented in the ES submitted in 2014.

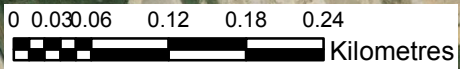
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Key
 Principal Project Area



REV	DATE	BY	DESCRIPTION	CHK	APP
DRAWING STATUS: FINAL					

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CLIENT:
C.GEN

PROJECT:
 North Killingholme DCO Amendments

TITLE:
 Site Location Plan

SCALE @ A3: 5,854 @ A3	CHECKED: LR	APPROVED: PD
PROJECT No: 70055743	DESIGNED: JSdS	DRAWN: JSdS
DRAWING No: Figure 1		DATE: 10/01/19
REV: -		

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Key

- Principal Project Area
- Reptile Survey Refugia Location

Phase 1 habitats

- Hard standing
- Bare ground
- Buildings
- Dry ditch
- Earth bank
- Fence
- Improved grassland
- Marginal and inundation - marginal vegetation
- Other tall herb and fern - ruderal
- Scrub - dense/continuous
- Standing water
- Swamp

REV	DATE	BY	DESCRIPTION	CHK	APP

DRAWING STATUS: **FINAL**

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CLIENT:

C.GEN

PROJECT: **North Killingholme DCO Amendments**

TITLE: **Figure 2
 Artificial
 Refugia Locations**

SCALE @ A3: 2,500 @ A3	CHECKED: LR	APPROVED: PD
PROJECT No: 70055743	DESIGNED: JSdS	DRAWN: JSdS
DRAWING No: Figure 2		DATE: 10/01/20
REV:		-

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