HORIZON NUCLEAR POWER

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HORIZON NUCLEAR POWER

Horizon Nuclear Power (Wylfa) Ltd

Consultancy Report: Dalar Hir

Reptiles Baseline Surveys 2014

September 2014

Jonathan Jackson

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Executive Summary

Jacobs UK Limited (Jacobs) was commissioned to carry out reptile surveys at land around Dalar Hir, Anglesey, centred on NGR SH32989 78381 in conjunction with potential development of the site. Dalar Hir is an area of grazing and cultivated land situated to the north of the A55 on the Holyhead Road, northeast of Junction 4. This report gives the methodology and results of those surveys.

The survey did not record any reptiles during any of the seven visits, which were all completed in suitable conditions. The results are considered appropriate to conclude that reptiles are absent and will not form a constraint to development of the site. No avoidance, mitigation or compensation measures for reptiles are recommended for the site if it is developed.

The habitats surrounding the survey area are similar to those on site and are therefore also unlikely to support large reptile populations. Colonisation of the site in the near future is therefore considered unlikely. It is considered that the survey results are valid for three years and would not need to be repeated if development happens within that time-span.

The survey did record common toads in numerous survey areas. The species is therefore considered highly likely to be present in suitable habitat throughout the survey area. Common toads are also listed under Section 42 of the Natural Environment and Rural Communities Act (NERC, 2006), which makes conservation of the species a material consideration in the planning process. Protection and mitigation measures must therefore be produced to accompany any future planning application for development of the site. This would include a method statement to protect common toads during works and retention of breeding and foraging habitats where possible.

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Contents

1 Introduction

1.1 Overview

Jacobs UK Ltd (Jacobs) was commissioned to undertake a reptile survey of suitable habitat within the redline survey area of the Dalar Hir site as shown in Figure 1, henceforth referred to as “the site”.

This work will support potential EIA and planning requirements at the site if required.

1.2 Site Description

The site is centred on National Grid Reference SH 32989 78381and is located near to Junction 4 of the A55, directly north of the Holyhead road (A5), Anglesey, North Wales.

The site covers an area of approximately 24 ha. and largely comprises of improved grassland, semi-improved grassland and cultivated fields that are divided by hedgerows. There are also strips of broadleaf woodland plantation on the northern, eastern and southern boundaries of the site. Other habitats present include three ponds and a ditch that runs from north to south through the centre of the site.

The site also includes the go-cart track at Cartio Mon and associated buildings within the east of the site, and the Dalar Hir Farm with associated buildings within the west of the site.

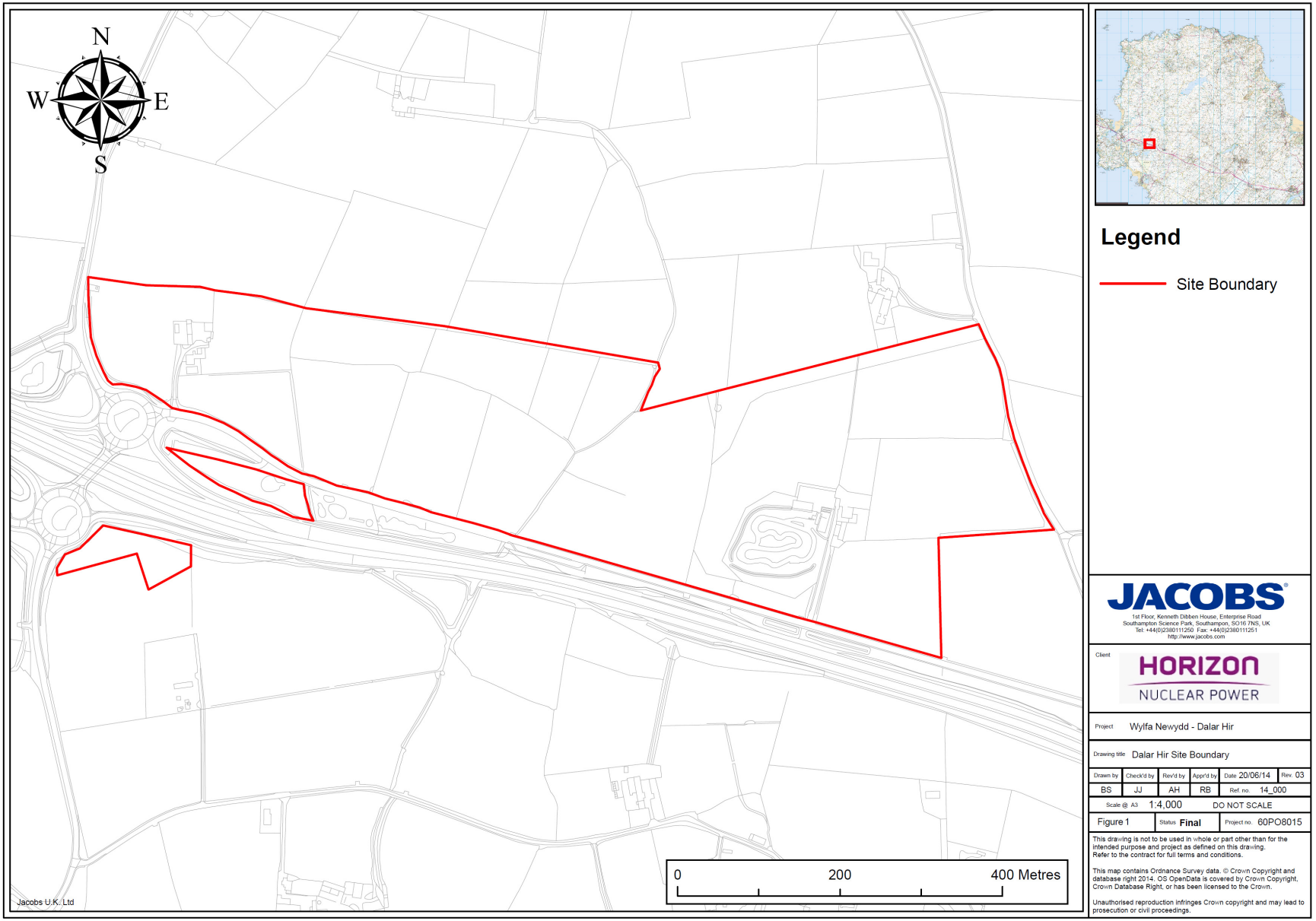

Figure 1: The survey area at Dalar Hir, Anglesey.

1.3 Aims and Objectives

As part of the impact assessment required for any future development of the site, a requirement for further temporal and spatial data relating to the presence of reptiles at Dalar Hir was identified.

The specific aims of the surveys were to:

- determine the presence or likely absence of reptiles in the survey area;
- evaluate the results in the context of previous surveys that have been carried out in the survey area; and
- inform the need for further survey work.

1.4 Previous Background Data Searches

A background data search has not been completed to support the survey findings of this report. This is because a data search has already been completed as part of the due diligence environmental assessment (Mott MacDonald, 2013) and the extended Phase 1 habitat survey completed in 2013, (Jacobs, 2013); the results from these works are summarised below.

1.4.1 Statutory and non-statutory sites and habitats for nature conservation

There were no designated sites within the site boundary. However, two designated sites have been highlighted by Mott MacDonald (2013). These are the Llyn Traffwll Site of Special Scientific Interest (SSSI) located 1 km to the south of the site and the Valley Wetlands owned by the Royal Society for the Protection of Birds (RSPB). The SSSI has been designated for the small, shallow lake that supports an abundance of wildfowl species. The Valley Wetlands has reedbed habitats that support a number of reedbed specialist species e.g. water rail (*Rallus aquaticus*), marsh harrier (*Circus aeruginosus*) and Cetti's warbler (*Cettia cetti*) as well as other wildfowl species.

1.4.2 Reptile records

The NBN Gateway data set listed three species of reptile recorded within 2 km of the site; these are slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*) and adder (*Vipera berus*). No records were returned by a COFNOD data set search as part of the Due Diligence Report in 2013 (Mott MacDonald, 2013).

1.5 Previous Habitat Surveys

The Phase 1 habitat survey 2013 (Jacobs) recorded habitat suitable for reptiles across much of the site, although this was largely limited to field boundaries. Reptiles have not been recorded previously on site by Jacobs.

1.6 Legislation

All reptiles receive protection under the Wildlife and Countryside Act 1981 (as amended) and the Countryside and Rights of Way (CRoW) Act 2000 making it illegal to intentionally injure or kill these animals.

The adder is also listed under Section 42 of the Natural Environment and Rural Communities Act in Wales (NERC) as a priority species of 'principal importance'. Under this legislation such species are a material consideration in the planning

process and all ‘Competent Authorities’ have an obligation to give consideration to the species on this list in all of their activities, including planning issues.

2 Methodology

2.1 Habitat assessment

A habitat assessment was previously completed in 2013 (Jacobs) and so this was not repeated.

2.2 Field Survey

Areas of habitat with the potential to support reptiles were first identified using the Phase 1 habitat map taken from the Phase 1 Habitat Survey Report (Jacobs, 2013) and then revisited to confirm suitability in 2014. Surveys of these areas were then carried out using artificial refugia.

The survey methodology provides reptiles with artificial basking sites and cover called refugia. Reptiles are ectothermic meaning that they cannot control their body temperature internally and therefore need to gain heat from external sources to survive. Artificial refugia such as roofing felt tiles or metal sheets can be attractive to reptiles as they heat up more quickly than the surrounding environment, offering ideal conditions for reptiles to absorb heat.

This survey used artificial refugia made from bitumastic roofing felt cut into 50 cm x 50 cm pieces. The refugia were placed in 15 areas of suitable habitat. The number of refugia put in each location was assessed based on the size and quality of habitat in accordance with best practise guidelines (HGBI, 1998) and 'Herpetofauna Workers Manual' (Gent and Gibson, 2003). Full descriptions of the areas of suitable habitat where refuges were put out are described in Section 3 and the locations are shown in Figure 2.

Seven survey visits were completed within each survey area in 2014 between April and August. Surveys were carried out in optimal survey conditions, i.e. between 8 and 18 ℃, with minimal wind and little or no precipitation. Surveys were timed to coincide with the first sunny periods of the day to increase the chance of locating basking animals. During each survey, any animals seen basking on top of refugia were recorded and each tile was carefully lifted, recording any reptiles underneath. Incidental field signs of reptiles were also recorded including sloughed skins or faeces. Non-target species such as amphibians using the refugia were also recorded during the surveys.

The surveys also included a visual search for any reptiles that may be active or basking in surrounding habitat.

2.3 Limitations

There were no limitations to the results of the reptile survey beyond those normally expected for this type of survey. The main limitation in this regard is reptiles being present, but at a very low abundance and therefore potentially not being recorded despite being present.

3 Results

3.1 Habitat Descriptions

Brief descriptions of the areas of suitable habitat surveyed for reptiles are provided in Figure 2.

3.1.1 Area A

Area A was located to the east of the house adjacent to the Cartio Mon go-cart track. The area was a garden comprising over-grown amenity grassland and ornamental shrubs. The likelihood of the area to support reptiles was enhanced by the connectivity provided by hedgerows to the north, east and south of the garden. Five refugia were placed in this area.

3.1.2 Area B

Area B was located to the extreme east of the survey area. The area comprised a fenced-off strip of field in which there were newly planted sapling trees. The ground vegetation layer in this area was dominated by rough tussocks of grassland to the north merging into bramble scrub in the centre. The south of the area was much wetter and contained a higher proportion of soft rushes. Ten refugia were used in this area.

3.1.3 Area C

Area C was located on the same alignment as Area B on the same hedge but in a field to the north. The area also comprised a fenced-off strip of field in which sapling trees had been planted. The habitat was drier that Area B with bramble scrub dominating much of the ground vegetation. There were 15 refugia placed in this area.

3.1.4 Area D

Area D was located on the northern boundary of the survey area to the north of Area C. The area also comprised a strip of field that has been planted with sapling trees. The trees are larger than those in Area B and Area C and were much more widely spaced. The ground flora comprised rough grassland with much less bramble than Area B and Area C and was drier with no rushes present. There were 15 refugia placed in this area.

3.1.5 Area E

Area E was similar in composition to Area D and was also located on the northern boundary of the survey area. The eastern half contained a ground flora identical to Area D whereas the western half was wetter with longer more lush grassland. The area was wetter with willow woodland to the southwest (containing Pond 1). The most densely wooded area was heavily shaded and unsuitable for reptiles. There were 14 refugia placed in this area.

3.1.6 Area F

Area F is located to the south of the survey area and is between a field of pasture and a dry-stone wall which separates the area from a road. The area comprised a

strip of fenced off field in which there were lines of recently planted sapling trees. The ground vegetation was dominated by tussocky grassland with bramble and gorse scrub. The area was frequently very wet in places and there were extensive patches of vegetation dominated by rushes. There were 25 refugia placed in this area.

3.1.7 Area G

Area G was a continuation of Area F on the southern boundary of the survey area, separated by a small ditch. The habitats in this area are the same as Area F. There were 10 refugia put out in this area.

3.1.8 Area H

Area H was a continuation of Area G on the southern boundary of the survey area. The habitats in this area are the same as Area F. There were 19 refugia put out in this area.

3.1.9 Area I

Area I was a continuation of Area H on the southern boundary of the survey area, separated by a small ditch. The habitats in this area are the same as Area F. There were 12 refugia put out in this area.

3.1.10 Area J

Area J comprised a broad hedge bank running perpendicular to the dry-stone wall on the southern boundary of the survey area. The hedge had many gaps and comprised leggy gorse and hawthorn with small areas of grassland suitable for basking and foraging by reptiles. The bank was faced with dry-stone walling, which could also potentially offer habitat suitable for hibernating reptiles.

3.1.11 Area K

Area K was a continuation of Area I on the southern boundary of the survey area, separated by a small ditch. The habitats in this area are the same as Area F. There were 20 refugia put out in this area.

3.1.12 Area L

Area L comprised a broad hedge bank running parallel with the road to the south of the survey area. The bank was vegetated with leggy gorse and hawthorn with frequent bramble and bracken patches. Where there were gaps in the denser vegetation there was suitable habitat for reptiles although these were relatively small. Two refugia were placed in the largest areas.

3.1.13 Area M

Area M was located on the northern boundary of the survey area. The boundary comprised a broad hedge bank similar in composition to Area L. The habitats present were also similar to Area L, but with much larger areas of open habitat. Eight refugia were placed in this area.

3.1.14 Area N

Area N was located on the same hedge as Area M and had identical habitat structure and species composition. Three tiles were placed in the largest areas of suitable habitat in this area.

3.1.15 Area O

Area O is located to the south of the road bordering the survey area. The area comprises rough grassland and a small pond that was nearly dry at the time of the first survey visit. The habitat had a deep thatch indicating some age and optimal foraging habitat for reptiles. Ten refugia were placed in this area.

3.2 Refugia Survey Results

The results from the refugia survey areas shown in Table 1. The weather data from the surveys are shown in Table 2.

Table 1: Refugia survey results for Dalar Hir, Anglesey between April and August 2014.

Area	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7
A	0	0	0	0	0	0	0
B	0	0	0	0	0	0	0
C	0	0	0	0	0	0	0
D	0	0	0	0	0	0	0
E	0	0	0	3 common toad	0	0	0
F	0	0	0	2 common toad	0	0	0
G	0	0	0	0	0	0	0
H	0	0	0	0	0	0	0
I	0	0	0	0	0	0	0
J	0	0	0	0	0	0	0
K	0	0	0	0	0	0	0
L	0	0	0	0	0	0	0
M	0	0	0	1 common toad	0	0	0
N	0	0	0	0	0	0	0
O	1 common toad	0	1 common toad	5 common toad	0	0	0

Table 2: Refugia survey weather data for Dalar Hir, Anglesey between April and August 2014.

Weather factor	Visit 1	Visit 2	Visit 3	Visit 4	Visit 5	Visit 6	Visit 7
Temp ℃	14.0	15.0	17.0	17.0	17.5	17	16
Cloud 0/8 – 8/8	5	7	4	2	0	0	6
Rain 0 – 5	0	0	0	0	0	0	0
Wind 0 – 12	2	2	1	1	0	0	1
Suitable Yes/No/ Sub-optimal	Yes	Yes	Yes	Yes	Yes	Yes	Yes

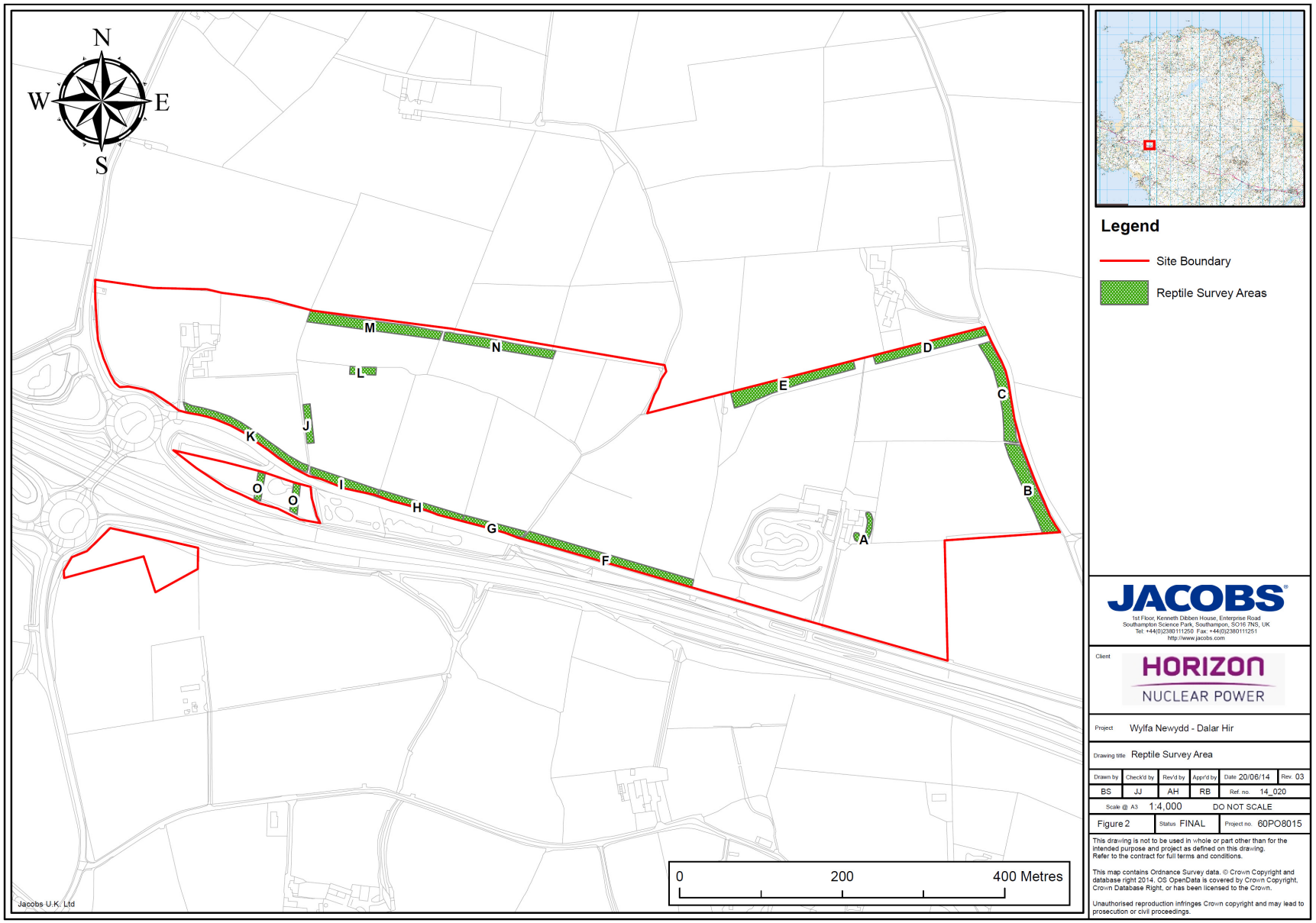

Figure 2: **Locations of refugia for reptile surveys, Dalar Hir, Anglesey.**

4 Conclusion and Recommendations

The reptile surveys did not find any reptiles during any of the visits which were all completed in suitable conditions. The results therefore indicate that reptiles are absent from the site and would not be a constraint to development.

The site is not connected to any areas of habitat that are likely to support any large populations of reptiles that might colonise the site in the near future. Combined with the relatively low populations of reptiles on Anglesey in general as evidenced from the background data search (Mott MacDonald, 2013), it is considered likely that the surveys will not need to be repeated for a minimum of three years.

The survey did record common toads in four areas and the species is therefore considered ubiquitous in suitable habitat where present. Common toads are a species of 'principal importance' as listed under Section 42 of the Natural Environment and Rural Communities Act (NERC, 2006), which makes conservation of the species a material consideration in the planning process (see Section 1.6). Protection and mitigation measures must therefore be included in any future planning application for development of the site. This would include a method statement to protect common toads during works and retention of breeding and foraging habitats where possible.

5 References

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