

Cheshire Ecology Ltd.

**RHOSROBIN, WREXHAM
Reptile Survey**

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EXECUTIVE SUMMARY

No reptiles of any species were recorded during the surveys. Reptiles are not considered to present a constraint to the development of the site.

We recommend that an Ecological Clerk of Works should be present when hedgerows, scrub and rubble are removed prior to development.

A toolbox talk should be given to contractors immediately prior to work commencing, so that they are aware of the different reptiles that may be present on the site and how to deal with them if they are found during the working day.

Although no reptiles were found during the survey the conditions appear suitable for slowworm. The proposed development should include mitigation for the loss of habitat.

Connectivity to surrounding semi-natural habitats, such as the woodland in the Alyn Valley, would be improved by planting hedgerows along the boundary with the cemetery. These should be composed of native woody species such as hawthorn, sloe, guelder rose *Viburnum opulus*, sessile oak *Quercus robur*, wych elm *Ulmus glabra* and ash *Fraxinus excelsior*. These should ideally be of local provenance. The hedgerows would also screen the cemetery from the new development.

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PLANS

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Plan CE120 - 2: Location of refugia.

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1 INTRODUCTION

1.1.1 Cheshire Ecology Ltd. was commissioned by the Castlemead Group Ltd. to undertake a reptile survey of land near Rhosrobin, in Wrexham County Borough, Wales, henceforth referred to as ‘the site’. The centre of the site is located at OS Grid Reference SJ330529. The site is roughly L-shaped and located at a height of approximately 90m AOD. The location of the site is shown in Figure 1.



Figure 1: Location map.

1.1.2 The site is bounded to the north by Plas Acton Road (Ffordd Plas Acton) and to the west by Main Road (Ffordd Fawr). To the east lies a new cemetery and to the southeast a railway line. The southern boundary is formed by a recent housing development, known as ‘Churchlea’. The site boundary is shown in Plan CE120-1.

1.1.3 The site consists of five agricultural fields, divided by hedgerows. Most of the fields are shown as arable land in an undated Phase 1 Habitat Survey plan provided by Cofnod (2014). The site is currently unmanaged and covered by tussocky, semi-improved grassland.

- 1.1.4 Study of old Ordnance Survey maps shows the site has probably always been agricultural land and there is no evidence for any buildings on the site. The site is traversed from west to east by a public footpath. Anecdotal evidence suggests that the fields were recently used for producing turf.
- 1.1.5 The site is located approximately 300m to the south of the River Alyn and Wilderness Wood. The surrounding land is mainly used for residential housing, but agricultural fields lie to the west and north of the site. The northern part of the site is slightly higher, with the ground sloping away to the west and south. To the south, an earth bund has been constructed along the boundary with 'Churchlea'.
- 1.1.6 The most important habitats within the site boundary are, in order of importance:
- Neutral grassland
 - Hedgerows
 - Scrub
 - Marshy grassland
 - Amenity grassland
- 1.1.7 The majority of the site consists of semi-improved neutral grassland, separated by hedgerows. There are three small areas of marshy grassland, which could potentially be attractive to grass snake *Natrix natrix*. Aerial photographs show that the site was originally used for grazing cattle. The site is no longer managed and the grass had become rank and tussocky.

1.2 Legislation

- 1.2.1 Wales has five species of native reptile. The adder *Vipera berus*, grass snake, slowworm *Anguis fragilis* and common lizard *Zootoca vivipara* are only protected under sub-section 9(1) and all of sub-section 9(5) of the Wildlife and Countryside Act, from deliberate killing, injury or trade. The habitats of these species are not protected.
- 1.2.2 The sand lizard *Lacerta agilis* used to be common along the coast of North Wales, but became extinct in the 1960s following development and sea defence work. It has now been re-introduced and there are currently breeding populations of sand lizard in several Welsh dune systems. The sand lizard is protected under the Conservation of Habitats and Species Regulations 2010 as amended, otherwise known as the 'Habitat Regulations'. Under this legislation it is an offence to:
- Deliberately kill, capture or injure a sand lizard;
 - Deliberately disturb a sand lizard;
 - Deliberately take or destroy its eggs; and
 - Damage or destroy a breeding site or resting place of a sand lizard.

- 1.2.3 All native reptiles are 'Priority Species' in the UK Biodiversity Action Plan (UKBAP).

1.3 Data trawl

- 1.3.1 The desktop survey involved data searches for statutory and non-statutory sites, legally protected species and other features of interest within a 2km radius of the site. The central grid reference of the site was used for the data searches.
- 1.3.2 The baseline information was obtained from:
- Cofnod – North Wales Environmental Information Service;
 - Study of Ordnance Survey maps;
 - Aerial photography;
 - The NBN Gateway (National Biodiversity Network) website;
 - The MAGIC website;
 - Natural Resources Wales;
 - The UK Biodiversity Action Plan (UKBAP); and
 - The Wrexham County Borough Biodiversity Action Plan.
 - Wrexham County Borough Council.
- 1.3.3 A grass snake was found in Wilderness Wood, near the Pandy Industrial Estate, in 2011 (Cofnod, 2014). This record was only 200m from the northern boundary of the site. There are also records from 1993 of adder, grass snake and common lizard from Fishpond Wood (Cofnod, 2014). This is approximately 500m to the northwest of the site. These records are historical, but the area in question appears ideal for reptiles and the absence of data is probably due to a lack of recording effort, rather an absence of these species. There are also a number of records for grass snake from Alyn Waters Country Park, which is approximately 1.8km north of the site.

1.4 Limitations

- 1.4.1 The majority of the refugia were left undisturbed by the general public. The only exception was in the field next to the railway line where refugia were regularly moved and on one occasion were nailed to pieces of wood to use as a BMX jump. The refugia were replaced on the next visit to the site.

2 METHODOLOGY

- 2.1.1 The survey followed the methodology outlined in the *Herpetofauna Worker's Manual* (Gent and Gibson, 2003) and the Froglife publication *Reptile Survey: an introduction to planning, conducting and interpreting surveys for snake and lizard conservation* (Froglife, 1999).
- 2.1.2 A total of forty-five refugia were placed in suitable habitats around the site on 5th April 2014. The refugia consisted of thirty-five sheets of roofing felt, measuring approximately 100cm x 75cm and ten carpet tiles. The refugia were placed in areas of the site that were considered attractive to reptiles, such as areas of short-grass near scrub, hedgerows and marshy grassland. The location of the refugia is shown in Plan CE120-2.
- 2.1.3 The site was visited on seven occasions between 8.30am and 11.00am and 4.00pm to 6.30pm, as recommended in Froglife (1999). The surveys were undertaken between 19th April and 6th May 2014.
- 2.1.4 Surveying was carried out when the ambient temperature was between 9°C and 18°C. Surveying was cancelled if heavy rainfall was forecast.
- 2.1.5 All of the refugia were carefully inspected for evidence of reptiles. The refugia were replaced in the same position after inspection. The site was walked in circular direction, starting and ending at the northern entrance. The remainder of the site was inspected for evidence of reptiles as the survey was taking place. Particular emphasis was placed on checking potential basking areas, areas of marshy grassland and piles of rubble or wood.

3 RESULTS

3.1 Field survey

- 3.1.1 No reptiles of any species were recorded during the surveys. A large number of ant nests were found under the refugia, a single common toad and two wood mice. There was also evidence of field voles, which are probably predated upon by buzzards and foxes.
- 3.1.2 There were no piles of compost or manure heaps on the site that could have provided a nesting opportunity for grass snakes. February was quite wet and most of the marshy grassland had areas of standing water for a short time. All of the water had drained away by the end of March. There were insufficient amphibians present to support grass snake and little cover to protect them from predators.
- 3.1.3 The site was inspected for areas of rotting timber, sheets of plywood from building activity and rubble, which could harbour slowworm. None were found, although there is a small amount of wood debris beneath Tree 1 and there are a few stones at the bottom of the hedgerows. Areas of rubble may exist beneath the bramble patches, but, if present, they were obscured by the vegetation.
- 3.1.4 A local utility company had recently cut back the hedgerows to renew the electricity transmission lines that cross the site. Most of the timber had been reduced to woodchips and placed in piles beside the hedgerows. There were also accumulations of broken branches that hadn't been reduced to chips. These were checked for the presence of slowworm.
- 3.1.5 A summary of our findings is shown in Table 1.

4 CONCLUSIONS

- 4.1.1 At first sight the site has moderate potential for reptiles. There are extensive areas of grassland, with shorter areas that could be used for basking and patches of brambles that could provide cover. Unfortunately there is quite a lot of recreational pressure from local residents and few areas of the site are completely undisturbed. The site is quite open and there is limited cover for reptiles and other wildlife.
- 4.1.2 Only one common toad was found during the survey. This is quite a low number for such a site, particularly when there are several potential breeding ponds and ditches in the immediate vicinity. The toad is the main prey of grass snake, which may explain why the latter is apparently absent from the site.
- 4.1.3 Based upon the findings of the survey, reptiles are not considered to present a constraint to the development of the site.

5 RECOMMENDATIONS

- 5.1.1 The negative results of the survey should not be taken as an indication that reptiles are completely absent from the site. The project followed the standard methodology for reptile surveys, but it is extremely difficult to detect these animals if they occur in low numbers. Contractors should be made aware that reptiles may be encountered and that it is illegal to kill or injure them.
- 5.1.2 We recommend that a suitably qualified ecologist (an Ecological Clerk of Works) should be present when hedgerows, scrub and rubble are removed prior to development. Any reptiles that are found should be translocated to an alternative location close to the site. A toolbox talk should be given to contractors immediately prior to work commencing, so that they are aware of the different reptiles that may be present on the site and how to deal with them if they are found during the working day.
- 5.1.3 Although no reptiles were found during the survey the conditions appear for slowworm. Development of the site will result in the loss of habitat for this species and strategically placed woodpiles should be provided at suitable locations around the proposed development.
- 5.1.4 Vegetation should be cut back to a height of 20cm a few days before development commences. This will allow any wildlife that is present to disperse to other locations. An Ecological Clerk of Works should be present when this is done. The vegetation should be maintained at this height until the development has been completed to deter reptiles from re-colonising the site.
- 5.1.5 Study of old Ordnance Survey maps shows that the layout of the hedgerows on the site has remained unchanged for over one hundred years. Where possible the existing hedgerow network should be retained. This provides a dispersion corridor for reptiles and amphibians.
- 5.1.6 Connectivity to surrounding semi-natural habitats, such as the woodland in the Alyn Valley, would be improved by planting hedgerows along the boundary with the cemetery. These should be composed of native woody species such as hawthorn *Crataegus monogyna*, sloe *Prunus spinosa*, guelder rose *Viburnum opulus*, sessile oak *Quercus robur*, wych elm *Ulmus glabra* and ash *Fraxinus excelsior*. These should ideally be of local provenance. The hedgerows would also screen the cemetery from the new development.

6 REFERENCES

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APPENDIX A: PHOTOGRAPHS



Photograph 1: Forty-five refugia were placed at suitable locations around the site.



Photograph 2: The majority of the site consists of open fields.



Photograph 3: A public footpath crosses the site.



Photograph 4: The fence is now broken and people can roam freely around the site.



Photograph 5: Hawthorn hedges separate the fields.



Photograph 6: There are three small areas of marshy grassland at the site.

Cheshire Ecology Ltd. - Reptile Survey							
CE120	Site: Rhosrobin, Wrexham			OS Grid Reference		Client: Castlemead Group Ltd.	
Survey date	Temperature	Weather conditions	Start	Finish	Surveyor	Refugia	Reptiles found
5/4/2014	Refugia installed						
19/4/2014	16.1°C	Clear, dry, some cloud.	15.45	16.50	MP&JC	35 refugia	No reptiles found. Dead badger. Two refugia had been moved to make a BMX jump. One missing.
20/4/2014	15°C	Cloudy, dry, with a slight breeze.	16.00	16.55	MP	35 refugia	No reptiles found.
21/4/2014	10°C	Cloudy. Dry.	09.30	10.15	MP	35 + 10 carpet tiles	No reptiles found.
28/4/2014	18.5°C	Dry, hazy sunshine, slight breeze.	17.45	18.30	MP	35 + 10 carpet tiles	No reptiles found. Refugia moved in Field 5.
3/5/2014	14.5°C	Dry, high cloud. Slight breeze.	16.40	17.30	MP	35 + 10 carpet tiles	No reptiles found.
4/5/2014	17°C	Dry, cloud, slight breeze.	16.55	17.40	MP	35 + 10 carpet tiles	No reptiles found. Refugia moved in Field 5.
6/5/2014	14.5°C	Dry. Still, with continuous cloud.	16.15	16.45	MP	35 + 10 carpet tiles	No reptiles found.

Table 1: Results of reptile survey

Key to habitats



Site boundary

Do not scale from this drawing

Client

Castlemead Group Ltd.

Project name

Rhosrobin, Wrexham

Drawing

Site boundary

Drawing No

CE120-1

Version

1.0

Date

7.3.2014

Drawn by

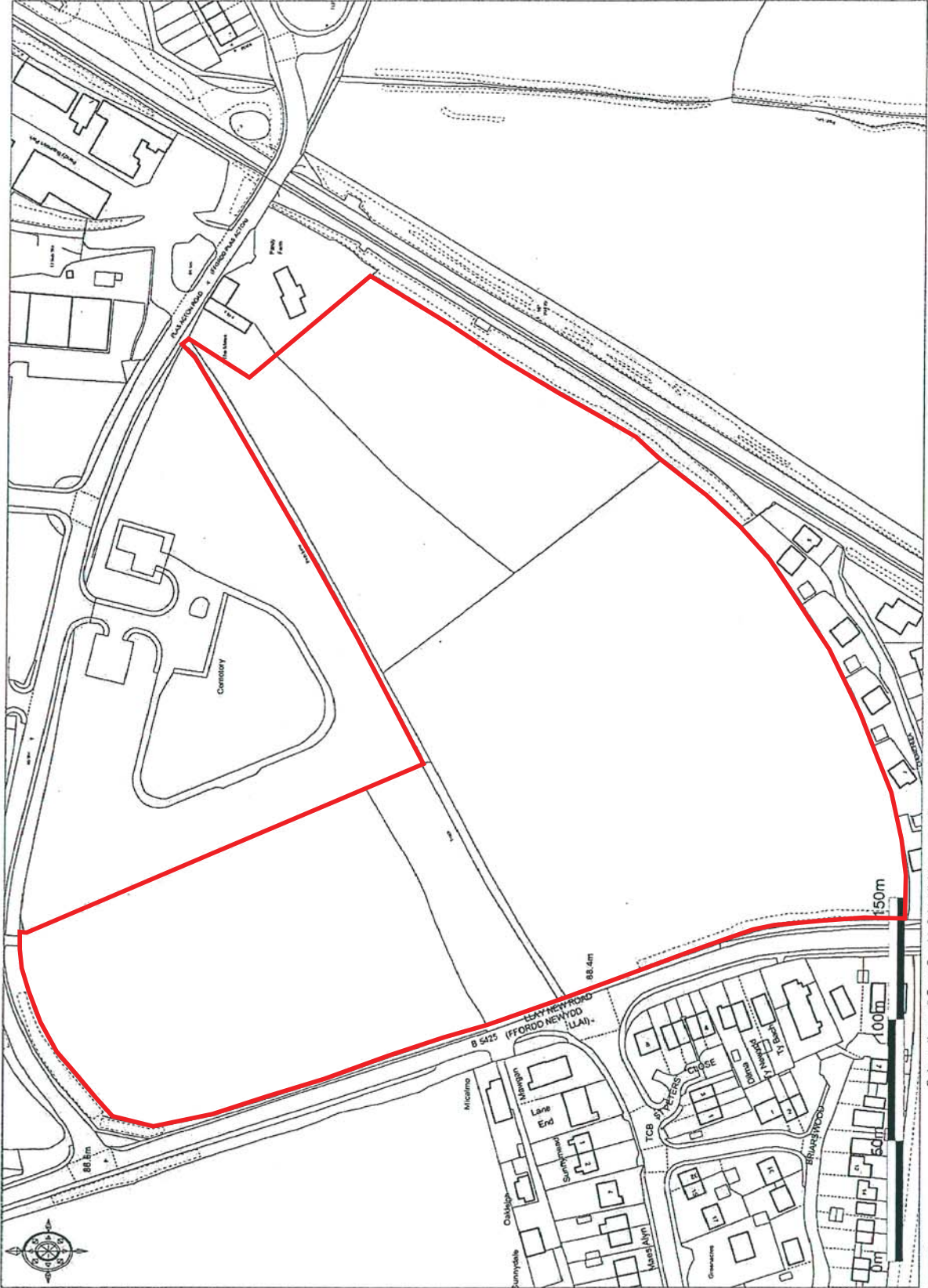
MP

Scale

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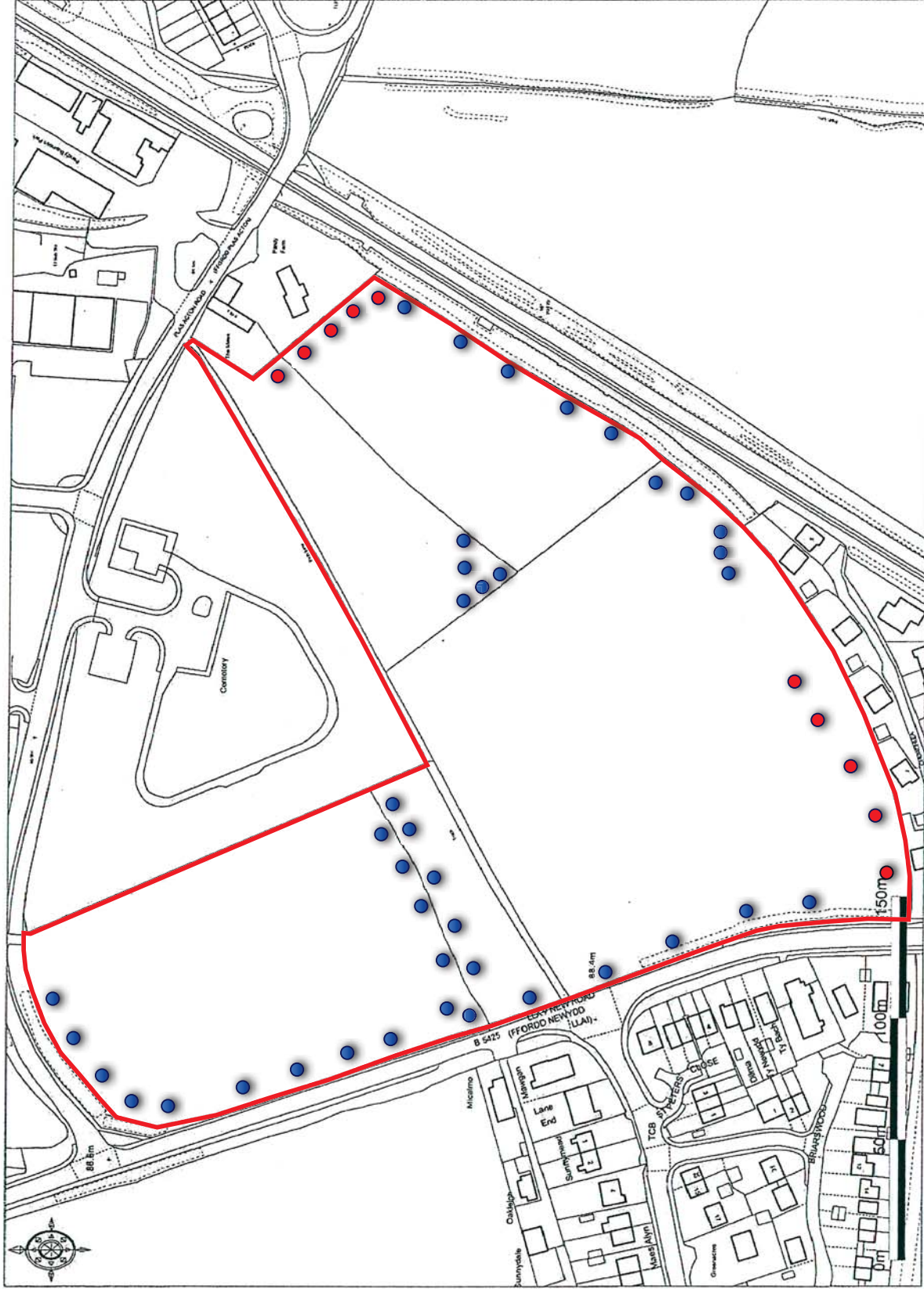
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Key to plan



Site boundary

Roofing felt sheet



Carpet tile



Do not scale from this drawing

Client

Castlemead Group Ltd.

Project name

Rhosrobin, Wrexham

Drawing

Reptile Survey - Location of refugia

Drawing No
CE120-2

Version
1.0

Date
18.5.2014

Drawn by
MP

Scale
1: 1,250

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