

Habitat Management Plan (HMP)

Project: Land off Jacques Way, Wrexham, LL11 2BY

Client: Castlemead Group Ltd

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The contents of this report are confidential and may contain information regarding protected species of a sensitive nature

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The findings of this report are valid for a maximum of **two years** from the final review date, however Pearce Environment Ltd recommend an annual update owing to potential changes in site conditions/ constraints

This is a technical report and **does not** represent legal advice/ opinion

Pearce Environment Ltd retain the right to re-publish data obtained and submit those species records produced during all ecological studies to the local recording centre

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1. INTRODUCTION

1.1 COMMISSION AND PURPOSE

- Pearce Environment Ltd were commissioned by Castlemead Group Ltd to prepare a Habitat Management Plan (HMP) for the reptile conservation area (RCA) at the Land of Jacques Way, Wrexham, LL11 2BY (hereafter referred to as 'the site'). The site is centred on approximate Ordnance Survey Grid Reference (OSGR) SJ 32850 50620.
- The HMP detailed within this document is to be used to discharge Condition 4 of planning permission for the residential development of the site involving the erection of affordable housing units comprising 19 no. dwellings and 6 no. flats, and associated works (P/2018/0898; **Appendix 1**). Planning permission was granted on 7th June 2019.

1.2 AIMS

- The aims of this document are to:
 - i. Produce a detailed ten (10) year habitat creation and management plan, including:
 - Describe and evaluate the features to be managed and any ecological trends/ constraints on the site that may influence management;
 - Describe the aims and objectives of management;
 - Detail proposed boundary treatments for the RCA;
 - Prepare a works schedule;
 - Detail personnel responsible for implementation of the plan;
 - Detail a monitoring/ review scheme; and
 - Detail funding resources and mechanisms.

1.3 BACKGROUND

- A Reptile Survey Report was produced by Pearce Environment Ltd in May 2018 (report reference: 200318). This identified a small population of common lizard (*Zootoca vivipara*) upon the site.

2. HABITAT MANAGEMENT PLAN (HMP)

2.1 AIMS & OBJECTIVES

- The primary aim of this HMP is to ensure the maintenance of favourable habitat for common species of reptile (specifically common lizard) within the reptile conservation area (RCA), both to support small population(s) of this species and to allow continued connectivity with the wider landscape.
- The following broad management objectives have been set, based upon the specific habitat requirements of common lizards:
 - Maintenance of a varied/ diverse vegetation height and structure within the RCA;
 - Access to hibernation features within the RCA;
 - Shelter from predators/ the elements within the RCA;
 - Feeding opportunities within the RCA;
 - Basking opportunities within the RCA;
 - Retention of connectivity along the railway.
- Several habitat creation/ management measures for the RCA were outlined in the Reptile Survey Report by Pearce Environment Ltd in May 2018 (report reference: 200318), including (but not limited to) the following:
 - Scrub management;
 - Tree management;
 - Hibernacula/ refugia creation;
 - Fence installation.
- The habitats within the RCA are to be managed over a period of ten (10) years to achieve the desired outcome. A review will be made following this period to prescribe any further actions necessary to ensure long-term success.

2.2 SITE DESCRIPTION

- The site is set in an urban environment, near to the centre of Wrexham, and is directly surrounded by a mixture of residential housing and industrial estates in all directions (**Figure 3.1; Figure 3.2**). A railway cutting/ embankment – considered to provide areas of favourable reptile habitat, known to have previously supported reptile populations and providing potential connectivity to the wider landscape – abuts the entirety of the western site boundary.
- The site itself (~0.45 hectares), situated on previously-disturbed and neglected ground, is composed of the following range of broad habitats (**Image 2.3; Image 2.4**):
 - Scattered trees
 - Scattered scrub
 - Tall ruderal vegetation
 - Poor semi-improved grassland
 - Bare ground
 - Fencing/ walls
- The area to be retained for the RCA (western site margin/ southern corner of the site) is composed of poor semi-improved grassland, scattered scrub, scattered trees and bare ground. A number of existing, potential, artificial refugia (such as rubble/ spoil heaps and various discarded building materials/ debris) are also present on the site.

Figure 3.1 Site location & application boundary (outlined in red) reproduced using freely-available online mapping resources (2018)

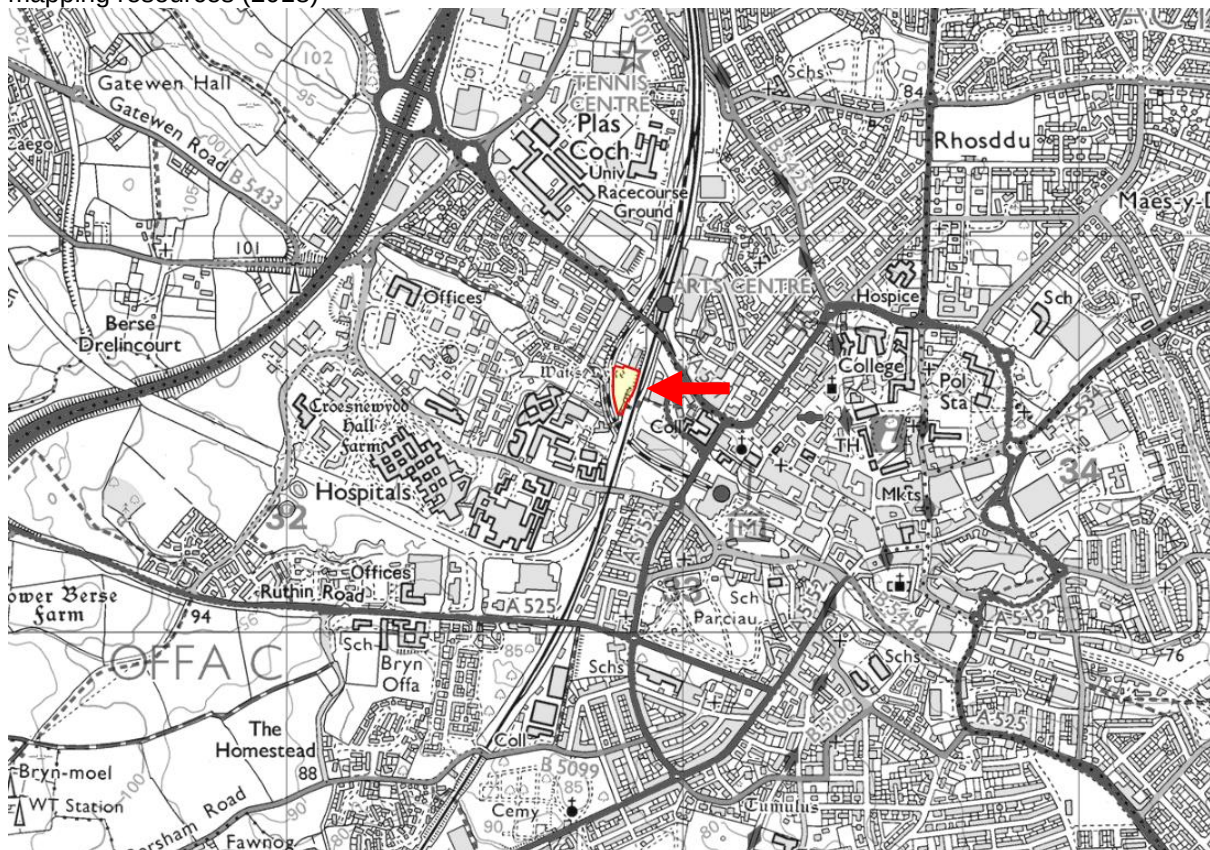


Figure 3.2 Aerial view of the site (outlined in red) and immediate surrounds reproduced using freely-available online mapping resources (2018)



Image 3.3 A typical view of the site, looking south (2018)



Image 3.4 A typical view of the western site margin and adjacent railway line, which will be retained and managed as the RCA (2018)



2.3 ECOLOGICAL CONSTRAINTS

- The following ecological constraints were identified upon the site during Phase 2 reptile surveys in 2018, summarised below:
 - There is the potential for encountering reptiles – notably common lizard – along the western/ southern site margins and within piles of debris/ artificial refugia upon the site.
 - Piles of debris/ artificial refugia may also provide potential shelter/ hibernation opportunities for hedgehog(s).
 - The scattered trees and scrub provide good nesting opportunities for passerine bird species.
- No further notable observations of ecological significance were recorded.

2.4 HABITAT CREATION AND MANAGEMENT

- All management recommendations are based upon guidance detailed within the Reptile Habitat Management Handbook¹.

Scrub/ Grassland Management

- It is recommended that the main body of ground within the RCA is maintained as a mosaic of rank sward grassland and localised areas of scrub – common lizard have a preference for structurally diverse/ varied height vegetation. The vegetation currently within the RCA is to be managed in such a way as to control the succession to woody, over-shading vegetation.
- Simultaneous removal of grassland/ scrub from the entire RCA should be avoided, with a cutting regime recommended whereby the RCA is sub-divided into three (3) sub-plots and cut on a rotational basis.
 - Cutting of scrub should take place within one (1) plot annually, during the winter months (November – February inclusive), to avoid the bird nesting season and when reptiles are least likely to be killed during periods of hibernation/ inactivity.
 - Cutting of grassland should be undertaken within one (1) plot biennially, during the winter months (November – February inclusive), to avoid the bird nesting season and when reptiles are least likely to be killed during periods of hibernation/ inactivity.
 - De-vegetation must be carried out in a phased fashion, using hand tools and with clearance undertaken from a central point and outwards – vegetation will be subject to an initial cut to ~200mm ('boot height'), then remaining vegetation can then be removed below 100mm immediately thereafter.
- There will be no application of pesticides except the use of herbicide for spot spraying of injurious weeds (if necessary).
- Grass cuttings may be piled and left within the RCA as egg-laying material so common reptiles, such as grass snake (*Natrix helvetica*).
- Localised areas will be sown with a suitable grassland mix during the autumn or spring, the precise composition of which will be agreed with an ecologist prior to ordering the mix according to availability of mixes at the time, but comprising a mix of native species of local provenance². Sowing of the grassland will be as per the supplier's recommendations.
- Re-seeding, where required, will be undertaken during the following spring or autumn.

¹ Edgar, P., Foster, J. & Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

² We recommend EM1 seed mix from Emorsgate (Basic General Purpose Meadow Mixture)

Tree Management

- Tree coverage is to be reduced to ~10%, by way of an initial removal of young trees within the RCA during November and February (to avoid the bird nesting season).
- The retained trees are to be amongst those sited at the top of the embankment/ slope.
- Tree coverage is to be maintained below 10%, with any necessary clearance undertaken during annual scrub clearance works, if necessary
- Trees are to be cut stumps are to be left *in situ*.

Brash & Log Piles

- Refuge opportunities (rubble/ brash/ log piles) will be created throughout the management period, as appropriate, utilising appropriate materials on the site and the arisings from any scrub/ tree management works wherever possible. Brash piles are of particular value for common lizards.
- Piles should be of irregular sizes and shapes, placed in sunny locations throughout the RCA and set within existing tall-sward vegetation (to ensure adequate shelter/ cover immediately surrounding these features). The central portion of log/ brash piles should be tightly compacted, with the outer branches laid on more loosely.
- Additional arisings/ material from ongoing scrub management activities may be placed upon existing brash/ log piles as they decompose.

Basking Banks/ Hibernacula

- A minimum of one (1) substantial hibernaculum/ basking bank is to be created within the RCA, sited within existing vegetation in a sunny area of the RCA. This will provide both basking and hibernation opportunities.
- This is to be constructed from cut timber/ brash/ rubble/ bricks/ hardcore/ tree roots etc. (utilising existing materials on the site/ arisings from de-vegetation wherever possible), set within a slight excavation/ scraping and covered with soil/ turf and ideally be a minimum of 4m long, 2m wide and 1m high.

Fencing

- Suitable fencing will be installed along the edge of the RCA, as necessary, to form a clear barrier. Maintenance requirement for this fence is expected to be minimal.
- Secure pedestrian access gate(s) must be incorporated into the RCA fencing in order to allow contractors/ an ecologist to enter the RCA for habitat management/ monitoring purposes.

2.5 MONITORING

- An annual monitoring check by a suitably-qualified ecologist is required in order to ensure compliance with the prescribed HMP and to review its efficacy. The HMP may be updated accordingly should amendments be required in order to achieve the desired result.
- A visual search and refuge survey should be undertaken of the RCA once annually, to determine the presence of likely absence of reptiles utilising the RCA. Visual searches are best undertaken in early spring when vegetation coverage is minimal and reptiles are most likely to be spending time basking. Refuge searches may be undertaken at the same time of year, or alternatively between June and September (with April, May and September the optimal months). A number of artificial refugia (tin/ Onduline sheets) will be placed around the RCA to aid with refuge searches and as further enhancement of this area.
- Further attention should be paid to the following during monitoring visits:
 - Scrub/ grassland coverage – alter cutting regime, as necessary;
 - Subsidence of hibernacula/ basking bank – notify contractors and undertake remedial action, as necessary;
 - Condition of fencing – notify contractors and repair, as necessary.

Progress Review

- An evaluation and review of the ten (10) year HMP will be undertaken following the final monitoring visit in 2028/29, in order to renew the HMP and thus ensure the long-term favourable status of the RCA.

2.6 FUNDING MECHANISM AND RESPONSIBILITIES

- Castlemead Group Ltd are responsible for the implementation of this HMP and will form a sufficiently funded Management Company which will be responsible for carrying out the works schedule.
- The management company will appoint an agent to ensure the works are carried out by a competent contractor. An appropriately experienced Ecological Clerk of Works (ECW)/ environmental consultant will be responsible for carrying out site monitoring.
- This HMP will be reviewed by the developer, appointed ECW/ ecological consultant and the appointed management contractor and revised accordingly at the end of the ten (10) year management period.

3. WORKS SCHEDULE

Year	Month(s)	Action
Year 1 (2019)	September – October 2019	Undertake destructive hand search and erect RCA fencing prior to the initiation of any works on the site
	November 2019 – February 2020	- Scrub cutting rotation within RCA - Sow grassland seeds (as necessary) - Tree clearance to 10% - Create brash/ log piles from arisings
Year 2 (2020)	April 2020	Monitoring visit by an ecologist
	July 2020	Creation of hibernaculum/ basking bank
	November 2020 – February 2021	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA - Create brash/ log piles from arisings
Year 3 (2021)	April 2021	Monitoring visit by an ecologist
	November 2021 – February 2022	- Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2022	Monitoring visit by an ecologist
Year 4 (2022)	November 2022 – February 2023	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2023	Monitoring visit by an ecologist
	November 2023 – February 2024	- Scrub cutting rotation within RCA - Create brash/ log piles from arisings
Year 5 (2023)	April 2024	Monitoring visit by an ecologist
	November 2024 – February 2025	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2025	Monitoring visit by an ecologist
Year 6 (2024)	November 2025 – February 2026	- Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2026	Monitoring visit by an ecologist
	November 2026 – February 2027	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA
Year 7 (2025)	April 2027	Monitoring visit by an ecologist
	November 2027 – February 2028	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2028	Monitoring visit by an ecologist
Year 8 (2026)	November 2028 – February 2029	- Scrub cutting rotation within RCA - Create brash/ log piles from arisings
	April 2029	Monitoring visit by an ecologist
	November 2029 – February 2030	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA

Year 9 (2027)		Create brash/ log piles from arisings
	April 2027	Monitoring visit by an ecologist
	November 2027 – February 2028	- Scrub cutting rotation within RCA - Create brash/ log piles from arisings
Year 10 (2028)	April 2028	Monitoring visit by an ecologist
	November 2028 – February 2029	- Grass cutting rotation within RCA - Scrub cutting rotation within RCA - Create brash/ log piles from arisings
Year 11 (2029)		
	April 2029	Review, evaluate & renew HMP

4. BIBLIOGRAPHY

Edgar, P., Foster, J. & Baker, J. (2010). Reptile Habitat Management Handbook. Amphibian and Reptile Conservation, Bournemouth.

Appendix 1 Proposed Site Plan



BLOCK PLAN
SCALE - 1:200