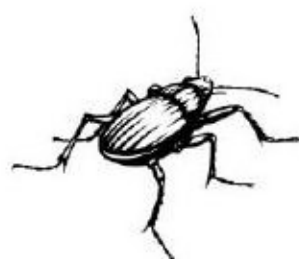


ECOLOGICAL SURVEYS AT THE RED HOUSE, DEE BANKS, CHESTER, CHESHIRE

2020



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1.0 INTRODUCTION

1.1 Rachel Hacking Ecology Limited was commissioned in 2020 by Sterling Properties Limited to undertake ecological surveys at The Red House, Chester and surrounding land. The site will be the subject of a planning application for the demolition of the current building on site to make way for a residential development. Biodiversity is a material consideration in planning and therefore ecological surveys are required. For The Red House, these included; an Extended Phase 1 Habitat Survey to provide an overview of the habitats present within the site and to assess any potential protected species issues on the site, a daytime bat survey to search any structures and trees to be affected for evidence of bat activity, and a Water Vole and Otter survey to search the River Dee, located immediately adjacent to the site.

Site Description

1.2 The Red House is located on the banks of the River Dee on Dee Banks, Chester (O.S. grid reference: SJ 41930 65331– see Figure 1). The site comprises a public house and restaurant set in well-managed terraced gardens comprising areas of bare ground, introduced shrub and amenity grassland. The site also includes a ponton on the River Dee. The site is surrounded by residential housing and a school to the north, south and east, and the River Dee and pastoral farmland lies to the west.

Aims of Surveys

1.3 The aims of the Phase 1 Habitat survey were to:

- Describe and map the habitats present on the site,
- Assess the potential for protected species to be present on the site or just outside the immediate site boundary,
- Identify where further survey may be necessary.



Figure 1 showing the site within the red line boundary

2.0 METHODOLOGIES

Extended Phase 1 Habitat Survey

- 2.1 A Phase 1 Habitat survey was undertaken to JNCC standards (JNCC, 2010). The site was walked, and each habitat was assigned a Phase 1 habitat category. The habitats surrounding the site were also mapped. Species lists were taken at locations of botanical interest. All botanical nomenclature follows Stace, 2019. A Phase 1 map was produced showing habitat boundaries.
- 2.2 During the Phase 1 Habitat survey, the habitats were assessed for their potential to support protected species. This included, for example, looking for signs of Badger activity (e.g. setts, paths, latrines and hairs on fences), assessing any waterbodies on site or near the site for their potential to support Great Crested Newt and assessing the potential for any buildings or mature trees to be used by bats.
- 2.3 The site was also surveyed for invasive, non-native plant species such as Japanese Knotweed and Giant Hogweed.

Daytime Bat Survey

- 2.4 The daytime bat survey involved an external survey of the building, which included, for example, looking for gaps between any soffit boards and walls, gaps between window frames and the walls, and looking for bat droppings on the walls and window ledges. The building was also searched internally for evidence of a bat roost, which included looking for the following signs:
 - live or dead bats
 - bat droppings
 - bat entry/exit points
 - bat urine staining
 - grease marks on any timbers
 - feeding remains such as insect wings
 - areas clear of cobwebs.
- 2.5 A pair of close-focussing binoculars and a high-powered torch to search for evidence of bats externally and internally. In addition, the trees on site were assessed from the ground using binoculars and ladders to search for bat potential roost features, such as cavities or peeling bark.

Water Vole Survey

- 2.6 The River Dee runs along the western boundary of the site and was surveyed for the presence of Water Vole, following the guidelines in Strachan, Moorhouse & Gelling, 2011. This included assessing the river for in-channel vegetation, bank profile, water depth and shading, for example. The eastern bank of the river was then searched for evidence of Water Vole activity including:

- latrines,
- feeding remains or feeding stations,
- burrows and feeding 'lawns',
- footprints,
- the sound of Water Voles entering the water.

Otter Survey

- 2.7 The banks of the River Dee were also searched for signs of Otter *Lutra lutra*, such as Otter holts, spraints or footprints.

Personnel and Timing

- 2.8 Ben Crossthwaite (Ecologist) undertook the survey on 2nd July 2020. The weather dry and mild with light cloud. Ben is experienced and fully trained in botanical and protected species surveys.

Survey Constraints

- 2.9 Daytime bat surveys can be undertaken at any time of year. The building was fully accessible to be surveyed internally and externally. July is within the optimum time of the year for botanical work and protected species appraisals. The site was fully accessible and there were no constraints to the survey.

3.0 RESULTS

HABITATS

- 3.1 The Phase 1 Habitat Map can be found at the back of the report. The habitats on site are described below.

Scattered Trees

- 3.2 A few scattered trees are located on site, within the shrub beds and along the northern boundary of the site (see Photograph 1). These ornamental trees range in age from young to early mature. Species include Laurel species *Prunus* sp. and Palm species.



Photograph 1 showing some of the ornamental trees on site

Introduced Shrub/Managed Scrub Mosaic

- 3.3 This habitat appears to comprise areas of formally unmanaged introduced shrub/continuous scrub which has now been cut back resulting in the current habitat (see Photographs 2 and 3). These areas now have a covering of Ivy *Hedera helix* and Hedge Bindweed *Calystegia sepium*. Other abundant species include Bramble *Rubus fruticosus* agg., Bamboo *Bambusoideae* sp. and Montbretia *Crocsmia x crocosmiiflora*.



Photograph 2 showing an area of introduced shrub/managed scrub mosaic



Photograph 3 showing an area of introduced shrub/managed scrub mosaic

Introduced Shrub

- 3.4 Shrub beds are located around the patio and decking areas (see Photographs 4 and 5). These are well-managed with species including Cypress *Chamaecyparis/Cupressocyparis* sp., various Ferns, Lavender *Lavandula* var., Hart's-tongue *Asplenium scolopendrium*, Montbretia *Crocsmia x crocosmiiflora*, Rhododendron *Rhododendron ponticum*, Variegated Hebe *Hebe x andersonii 'Variegata'*, Pendulous Sedge *Carex pendula*, Cotoneaster *Cotoneaster* var. and Variegated Box *Buxus sempervirens Elegantissima*.



Photograph 4 showing one of the introduced shrub beds



Photograph 5 showing some introduced shrubs

Amenity Grassland

- 3.5 This habitat is the most abundant on site and comprises various sections of lawn, broken up by terrace walls (see cover page above and Photograph 6 below). The grassland is species-poor and regularly mown. Abundant species include Perennial Rye-grass *Lolium perenne*, Creeping Buttercup *Ranunculus repens*, Daisy *Bellis perennis*, Yorkshire Fog *Holcus lanatus*, White Clover *Trifolium repens*, Annual Meadow-grass *Poa annua*, Ribwort Plantain *Plantago lanceolata*, Dandelion *Taraxacum officinale* agg., Selfheal *Prunella vulgaris*, Creeping Thistle *Cirsium arvense* and Bird's-foot Trefoil *Lotus corniculatus*.



Photograph 6 showing an area of amenity grassland on site

Bare Ground

- 3.6 Bare ground is located across the site as areas of hardstanding access paths and car parking spaces, a tiled entrance, decking and patio space (see Photographs 7 and 8).



Photograph 7 showing an area of bare ground on site



Photograph 8 showing an area of bare ground (decking) on site

Scattered Scrub

- 3.7 Scattered scrub is located along the northern boundary of the site amongst the area of introduced shrub/managed scrub mosaic and in two small pockets located on the banks of the river (see Photograph 9). Species include Elder *Sambucus nigra*, Bamboo *Bambusoideae* sp., Goat Willow *Salix caprea*, Hazel *Corylus avellana* and Ash *Fraxinus excelsior*.



Photograph 9 showing some of the scattered scrub located on site

Intact Species-poor Hedgerow

- 3.8 A mature intact species-poor hedgerow runs along the southern boundary of the site (see Photograph 10). The hedgerow is dominated by Bamboo *Bambusoideae* sp. Leyland Cypress *Cupressus leylandii* is also present towards the eastern end of the hedgerow.



Photograph 10 showing the intact hedgerow along the southern boundary

Existing Buildings

- 3.9 The public house is the only building on site. A section of the building extends northwards beneath the car park area.

Boundaries

- 3.10 The boundaries and areas within the site are marked with fencing and brick and stone walls.

PROTECTED SPECIES

Great Crested Newt

- 3.11 Great Crested Newt *Triturus cristatus* is a European Protected Species (EPS) under the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019 and the species is fully protected under the Wildlife and Countryside Act 1981 (as amended).

- 3.12 No ponds exist on site or within 250 metres of the site boundary. The River Dee is not considered to be suitable breeding habitat for Great Crested Newt (GCN). The proposed development site supports suitable GCN terrestrial habitat. The areas of introduced shrub/managed scrub mosaic and introduced shrub offer favourable habitat as they provide cover from predation and foraging habitat for GCN.

Bats

- 3.13 All bat species are European Protected Species. This is implemented in the UK through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Bats are also protected under The Wildlife and Countryside Act 1981 (as amended), the Countryside and Rights of Way Act 2000 and the Natural Environment and Rural Communities Act (NERC, 2006).

- 3.14 The public house on site was the subject of a daytime bat survey. The results are detailed below. The building was fully accessible internally and externally with no constraints.

External Survey

3.15 The three-storey building is constructed from brick and has been rendered and painted. The ground floor and first-floor are at road level with a further lower ground floor located to the rear of the property. The render is in excellent condition, free from cracks, crevices or flaking bats may exploit (see Photographs 11 and 12). The lower ground floor consists a large glass extension (see cover page above and Photograph 13 below). The glass panes are in excellent condition and are well-sealed to each other with silicone and to the adjoining building.



Photograph 11 showing the exterior of the building



Photograph 12 showing the exterior of the building



Photograph 13 showing the roof of the glass extension to the rear of the property

- 3.16 The wood and uPVC window and door frames are all in good condition and well-sealed to the surrounding masonry (see Photograph 14).



Photograph 14 showing the exterior of the building

- 3.17 The pitched roof sections across the building are covered with slate roof tiles. A small flat roof is covered with roofing felt and the glass extension has a glass roof. The slate covered roofs are largely in good condition with only a couple of damaged roof tiles (see Photographs 15 and 16). However, these do not present any potential entry points. The ridge tiles are in good condition and well-sealed to the surrounding roof tiles. The felt covering the small flat roof and parapet walls is intact and free from rips, tears or folds bats may exploit (see Photograph 17). The metal capping along the parapet wall is tightly fitted to the wall with no gaps present. The large glass roof is well-sealed and the associated flashings are also in good condition (see Photograph 13 above).



Photograph 15 showing a section of the roof



Photograph 16 showing a section of the roof



Photograph 17 showing the small flat roof

3.18 The roof edges are well-sealed with mortar and coping stones (see Photographs 18, 19 and 20). No gaps, holes or missing sections of mortar are present.



Photograph 18 showing the southern gable end of the building



Photograph 19 showing the northern gable end of the building



Photograph 20 showing the roof edge of the entrance on the eastern side of the building

Internal Survey

- 3.19 The internal spaces of the building are set over a ground floor, a first floor and a lower ground floor. The ground floor and lower ground floors comprise the spaces associated with the public house and restaurant, consisting dining areas, bar and bar area, kitchen, toilet facilities and storage spaces (see Photographs 21 and 22). All these spaces are well-finished with no habitats associated with roosting bats.



Photograph 21 showing the dining area



Photograph 22 showing the kitchen area

- 3.20 The first floor comprises a long corridor with offices, staff rooms and a kitchen leading off of it (see Photographs 23 and 24). All the rooms and corridor space on the first floor are well-sealed habitable areas with no roosting bat habitat.



Photograph 23 showing the corridor on the first floor



Photograph 24 showing one of the office spaces

- 3.21 A roof void is located along the length of the first-floor space. This was easily accessed via a hatch and ladder. The void space is relatively low and very dusty and cobwebbed (see Photograph 25). The void floor has no insulation and in part is boarded out. The brick gable and supporting walls are in reasonable condition and well-sealed with mortar (see Photograph 26).



Photograph 25 showing part of the roof void space



Photograph 26 showing one of the supporting walls

3.22 The roof is lined with felt. The felt is in excellent condition and tightly fitted to the roof joists with no rips, tears or folds present (see Photograph 27). The roof timbers and metal frame are in good condition and free from cracks and crevices bats may exploit (see Photographs 28 and 29).



Photograph 27 showing a section of roof felt



Photograph 28 showing some of the roof timbers



Photograph 29 showing part of the metal frame

- 3.23 The roof void space appears well-sealed as no daylight could be seen at the roof edges. No evidence of bat activity or occupancy was found across the exterior or interior of the building.
- 3.24 The trees on site were inspected from the ground for Potential Roost Features (PRF's). None of the trees were found to support cavities, or other features that could be suitable for roosting bats. The site lacks suitable linear landscape features that bats could use for foraging and commuting habitat. However, the River Dee, adjacent to the western boundary of the site, provides suitable foraging and commuting habitat for bats.

Nesting Birds

- 3.27 All bird species are protected at their nest under the Wildlife and Countryside Act 1981 (as amended).
- 3.28 The trees, scrub and intact hedgerow on site provide suitable nesting habitat for birds.

Water Vole

- 3.29 Water Vole *Arvicola terrestris* is fully protected under The Wildlife and Countryside Act 1981 (as amended). This makes it an offence to:
- intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection;
 - intentionally or recklessly disturb Water Voles whilst occupying a structure or place used for that purpose;
 - intentionally kill, injure or take Water Voles;
 - possess or control live or dead Water Voles or derivatives;
 - sell Water Voles or offer or expose for sale or transport for sale;
 - publish or cause to be published any advertisement which conveys the buying or selling of Water Voles.
- 3.30 The River Dee is located directly adjacent to the western boundary of the site. The river extends further south and north through intensively managed farmland and Chester city and surrounding suburbs (see Figure 2).



Figure 2 showing the location of the River Dee and the red line boundary of the proposed development site

- 3.31 The River Dee is approximately 45-60 metres wide and at the bank is approximately 70-120cm deep (see Photograph 30). The topography of the man-made banks are vertical with reinforcing railway sleepers fixed along the bank (see Photograph 9 above and 31 below). The water quality is deemed to be moderate. Little-no aquatic or marginal vegetation is present with the steep banks covered with amenity grassland species. The only shading is provided by

the pontoon jetty. No evidence of Water Vole was found along the eastern (site side) bank.



Photograph 30 showing the River Dee



Photograph 31 showing the eastern bank (site side) of the River Dee

Otter

3.32 Otter *Lutra lutra* is a European Protected Species under the Conservation (Natural Habitats etc.) Regulations 1994. This is implemented in the UK through the Conservation of Habitats and Species (Amendment) (EU Exit) Regulations 2019. Otter is also protected under the Wildlife and Countryside Act 1981 (as amended). The legislation protects Otters from, for example, deliberate killing, capturing and disturbing and Otter and damaging or destroying a breeding place or resting place of an Otter.

3.33 No field signs of Otter were located during the survey, such as Otter holts, spraints or footprints. The eastern banks of the River Dee are not considered to be suitable Otter foraging habitat with much of them being man-made. Otters usually use tree roots to build their holts. The western bank offers more favourable habitat as it is lined with scrub and trees. The stretch of riverbank by the site supports no trees. No signs of a holt or any other Otter activity was found.

INVASIVE SPECIES

- 3.34 *Rhododendron ponticum* and *Montbretia Crocosmia x crocosmiiflora* are located within the shrub beds and introduced shrub/managed scrub mosaic. These are invasive, non-native species and is listed on Schedule 9 Part II (plants) of the Wildlife and Countryside Act 1981 (as amended). The act makes it an offence to allow these species to spread into the wild.

PROTECTED SITES

- 3.35 The site lies on the banks of the River Dee, which is a Site of Special Scientific Interest (SSSI) and is designated as part of the River Dee and Bala Lake Special Area of Conservation (SAC), a designation of international importance. No other statutory protected sites lie within 2.5km of the site boundary.
- 3.36 The site lies within a SSSI Impact Risk Zone, which lists certain types of development that may have a deleterious impact on protected sites nearby. Residential development is not listed within the criteria as being a potential risk.
- 3.37 No non-statutory protected sites could be located within 1km of the site boundary.

4.0 ASSESSMENT

HABITATS

- 4.1 The Phase 1 Habitats present on the site are common throughout the UK. No nationally rare or locally rare plant species were located during the Extended Phase 1 Habitat Survey.
- 4.2 The site supports amenity grassland, bare ground, introduced shrub/managed scrub mosaic, scattered scrub, introduced shrub and scattered trees. Most of the site is of limited ecological value. The amenity grassland and bare ground offer little/no cover and foraging habitat for wildlife. The introduced shrub/managed scrub mosaic, scrub, introduced shrub and trees on site provide cover from predation and foraging opportunities. However, these habitats are relatively small, isolated and are located around the site peripheries.

PROTECTED SPECIES

Great Crested Newt

- 4.3 No ponds exist on site or within 250 metres of the site boundary. The proposed development site supports suitable Great Crested Newt (GCN) terrestrial habitat. The areas of introduced shrub/managed scrub mosaic and introduced shrub offer favourable habitat as they provide cover from predation and foraging habitat for GCN. However, due to the lack of suitable GCN breeding habitat in the locality, it is deemed unlikely GCN is present on site and no further GCN survey work is necessary.

Bats

- 4.4 The building on site has been the subject of a daytime bat survey. Externally the public house is well-sealed with no potential bat entry points located. The internal rooms and spaces are well-finished with no bat roosting habitat present. The roof void space was thoroughly surveyed. The space was very dusty and cobwebbed. The felt roof lining was in excellent condition with no rips or tears present. The brick gable and supporting internal walls are all well-sealed with mortar and the roof timbers are in good condition, free from cracks and crevices. No evidence of bat activity or occupancy was found internally or externally. Due to this, it is considered the building offers **negligible bat roost suitability**. No further bat survey work is required, and bats are not considered to be a constraint on the development.
- 4.5 The trees on site were surveyed from the ground for potential bat roosting features, such as cavities or peeling bark. No such features were found. All the trees are considered to offer **negligible bat roost suitability**. The hedgerow on site offers suitable foraging and commuting habitat for bats. However, the River Dee offers better quality bat foraging habitat. The hedgerow is to be retained and no development is proposed that would impact on the River Dee corridor. The banks of the River Dee on site are currently unlit and it is recommended that no artificial light be erected to illuminate the banks, to protect bat foraging habitat.

Nesting Birds

- 4.7 The site supports suitable nesting habitats for birds within the hedgerow and shrubs/scrub. Nesting birds can be mitigated for by allowing no works to potential nesting habitats to be carried out within the bird nesting season (which is generally March – August) unless a nesting bird survey is undertaken first. General bird nest boxes are proposed as mitigation and compensation for the loss of nesting habitat (see Section 5 - Recommendations).

Water Vole

- 4.8 No evidence of Water vole was found along bank of the River Dee. The steep, man-made bank offer little/no burrowing habitat for Water Vole. The river lacks aquatic vegetation and marginal vegetation. No evidence of Water Vole was found along the riverbank or within the immediate habitats. The riverbank adjacent to/part of the site is currently considered to be sub-optimal Water Vole habitat. Water Vole is not considered to be a constraint on the development at this time.

Otter

- 4.9 The bank of the River Dee was surveyed for Otter. No field signs were located during the survey, such as Otter holts, spraints or footprints. The eastern bank of the River Dee is not considered to be suitable Otter habitat with much of it being man-made and the terrestrial habitat consisting amenity gardens. Otters usually use tree roots to build their holts. The opposite riverbank to the site supports more favourable habitat as the bank is sloped and covered with scrub and trees. No signs of a holt or any other Otter activity was found. Therefore, Otter it is considered to be a constraint on development at this time.

INVASIVE SPECIES

- 4.10 *Rhododendron ponticum* and *Montbretia Crocosmia x crocosmiiflora* are present on site. These species are listed on Schedule 9 Part II (plants) of the Wildlife and Countryside Act 1981 (as amended). It is recommended that the *Rhododendron* and *Cotoneaster* are continued to be managed onsite, to prevent them spreading into the wild, or be removed prior to any clearance work commences.

PROTECTED SITES

- 4.11 The site lies on the banks of the River Dee SSSI which is also designated as part of the River Dee and Bala Lake SAC. No other statutory protected sites lie within 2.5km of the site boundary. No development is proposed within at least 10 metres of the banks of the river and therefore, there is expected to be no direct deleterious impact on the protected site from the development.

- 4.12 It is recommended that a Construction Environmental Management Plan (CEMP) is implemented during site clearance and construction. Other recommendations include, where possible or required, a suitable Sustainable Urban Drainage System (SUDS) and suitable habitat buffer zones incorporated within the landscaping. A shadow Habitats Regulations Assessment (HRA) may be required as part of the planning process.
- 4.13 The site lies within a SSSI Impact Risk Zone, which lists certain types of development that may have a deleterious impact on protected sites nearby. Residential development is not listed within the criteria as being a potential risk.
- 4.14 No non-statutory protected sites could be located within 1km of the site boundary.

5.0 RECOMMENDATIONS

5.1 Protected species are a material consideration within the planning process. Depending on the timing of the vegetation clearance works and demolition, the following surveys may need to be undertaken:

- **Nesting Birds** – It is recommended any vegetation clearance work is carried out outside the nesting bird season (generally March – August). If any tree felling or other vegetation clearance work needs to be carried out within the bird nesting season, then a nesting bird survey will be required immediately prior to work commencing.

River Dee SSSI and SAC Protection

5.2 It is recommended that a Construction Environmental Management Plan (CEMP) be produced to protect the River Dee from indirect impacts from the development phases. Where practical SUDS should be implemented. A shadow HRA may be required as part of the planning process, due to the proximity of the protected sites.

Invasive Species

5.3 The Rhododendron and Montbretia should be removed from site using a recognised methodology or continued to be managed within the site to prevent these species from spreading into the wild.

Habitat Enhancement and Creation

5.4 If landscaping is designed, the following measures are recommendations to enhance the biodiversity value of the site:

- Soft landscaping should include the provision of native and non-native flowering perennial species, to provide a pollen and nectar source for invertebrates.
- Tree and shrub planting – where practical, native tree and shrub species should be planted.
- Bird and/or bat boxes could be erected onto the new building and/or retained trees.

5.5 It is recommended that a landscape buffer zone is designed along the banks of the River Dee, to enhance the wildlife corridor of the river and protect the river. This could include wildflower grassland and suitable tree planting.

6.0 REFERENCES

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PHASE 1 HABITAT MAP

