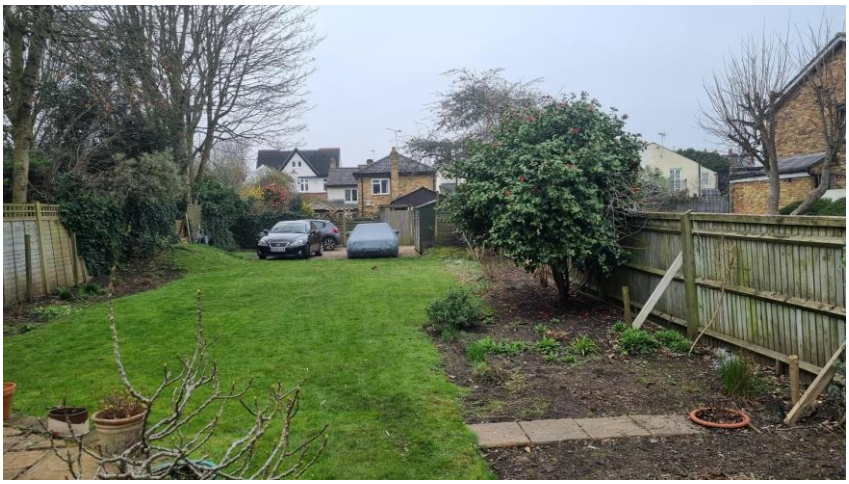

ECOLOGICAL ENHANCEMENT PLAN

Land to the rear of 39 Second Cross Road, Twickenham,TW2 5QY

A REPORT FOR ANDREW FRYATT

This report provides details regarding mitigation and enhancement measures in relation to proposed redevelopment at the site in order protect retained habitats and protected species

Orlando Campbell
ACIEEM

Assessment completed in March 2024

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Table 0.1 - Document and Version Control

Author	Orlando Campbell BSc (Hons) ACIEEM		
Site	Land to the rear of 39 Second Cross Road, Twickenham		
Reference	CE24017		
Type	Ecological Enhancement Plan		
Version	Approved	Checked	Date
V1	Clara Gonzalez Hernandez MCIEEM	Linda Kerrison ACIEEM	15/03/2024
V2	Minor Updates		15/08/2024

Copyright and guidance

The surveys and assessment have been drafted to be in accordance with; British Standard for Biodiversity BS42020:2013, Biodiversity - Code for planning and development and; the Code of Professional Conduct published by the Chartered Institute of Ecology and Environmental management.

N.B. It must be noted that investigations of this sort provide only a snapshot in time of the ecological conditions of a site, are limited in extent and cannot capture the full picture of the biodiversity interests at the given location.

Contents

1 Introduction

Background

1.1. Co-ecology Limited has been commissioned by Andrew Fryatt to compile an Ecological Enhancement Plan in relation to the development of the land to the rear of 39 Second Cross Road, Twickenham, TW2 5QY.

1.2. This enhancement plan document has been written to discharge the following planning condition (Ref: 22/0252/HOT) relating to the development within the site:

1.3. *"The development hereby permitted shall not commence until an Ecological Enhancement Plan, identifying proposals to enhance the biodiversity and ecology of the development site, along with a timetable for the delivery of the proposals has been submitted to and agreed in writing by the local planning authority."*

1.4. Following comments from Richmond upon Thames London Borough Council in August 2024 this Ecological Enhancement Plan has been updated to include ecological features for hedgehogs and invertebrates.

Purpose of Report

1.5. This report provides a summary of the ecological baseline, along with an assessment of the potential ecological impacts and constraints associated with the development. Proposed mitigation to protect retained habitats and protected species within the design and delivery of the development is included in this document. In addition, enhancement measures and suitable monitoring to enable an effective evaluation of the mitigation employed are detailed which will aim to augment the quality of the site in the long-term and ensure that any adverse impacts of development activities are fully mitigated, compensated and restored.

1.6. A habitat survey and protected species assessment of the site took place in March 2024 by Orlando Campbell, an ecologist with over six years' experience in producing ecological enhancement strategies.

1.7. The enhancements proposed within this document, form the basis of the strategy to be implemented as part of the development and have been devised in partnership with the scheme's owner/chartered surveyor and architects. Following the planning and review process and on confirmation of the construction programme amendments may be required.

Site Context

1.8. The site is approximately 0.045 hectares (ha) in size and is centred on Ordnance Survey National Grid reference TQ 15111 72846. The site lies within the district of Twickenham in the London Borough of Richmond and is situated within the Twickenham Green Conservation Area.

1.9. The site comprises a residential garden at the rear of 39 Second Cross Road, with vehicular access and a gravel driveway from the adjacent Chilvers close. The site comprises modified grassland, scattered trees, ornamental shrub vegetation, patio and two sheds. The perimeter of the site consisted of a wooden fence with a gated driveway entrance.

1.10. The site is bordered on all aspects by residential dwellings and associated gardens. Three mature trees in the neighbouring property overhang the garden.

Proposed Works

1.11. Proposals include the construction of a two-storey dwelling within the garden of 39 Second Cross Road, two new parking spaces and soft landscaping. This will result in the loss of the majority of grassland, patio and ornamental shrub beds. Two small trees, which are in poor health, will be removed to facilitate the development (Honey Arboricultural Consultancy, 2021). The neighbouring trees that overhang the site will be pollarded, retained and protected.

Relevant Legislation and Planning Policy

1.12. The following key pieces of nature conservation legislation are relevant to this document:

- The Conservation of Habitats and Species Regulations 2017 (as amended) (commonly referred to as the Habitats Regulations);
- Wildlife and Countryside Act 1981 (as amended);
- Natural Environment and Rural Communities Act 2006;
- Protection of Badgers Act 1992; and
- Wild Mammals (Protection) Act 1996.

1.13. The National Planning Policy Framework (Department of Communities and Local Government, 2021) requires local authorities to avoid and minimise impacts on biodiversity and to provide net gains in biodiversity when making planning decisions.

2 Baseline ecological/biodiversity features

Designated Sites

2.1. There are three statutory designated sites within 2km of the site boundary; Bushy Park Site of Special Scientific Interest (SSSI), Ham Lands Local Nature Reserve (LNR) and Crane Park Island LNR.

2.2. There will be no detrimental impacts to the designated sites due to the small scale of the development that is already encompassed in an urban landscape.

Habitats and Flora

2.3. The site comprises of formal gardens consisting of a modified grassland lawn surrounded by hardstanding patio and ornamental shrub beds. The lawn was managed and kept to a short sward. Two ornamental trees, a Cotoneaster and a severely decayed pear tree will be removed to facilitate the development (Honey Arboricultural Consultancy, 2021). Two sheds are also onsite and will be either retained or replaced on a like for like basis.

2.4. All trees and shrubs removed to facilitate the development will be replaced on a like-for-like basis using native species where possible.

Baseline Surveys

2.5. No ecological surveys or assessments of the site have been undertaken due to the small scale of the development in an urban environment.

2.6. A habitat and protected species assessment was undertaken by Orlando Campbell BSc (Hons) ACIEEM on the 6th March 2024 in dry and sunny weather conditions. The survey identified the site as having low ecological value due to the low diversity of flora and fauna and suspected absence of protected species. The current owner reporting that blue tits *Cyanistes caeruleus*, robins *Erithacus rubecula* and grey heron *Ardea cinerea* often visit the site as well as Lepidoptera species. Frog spawn was identified in a pond in an adjacent property which is well connected to the site.

2.7. Following the recommendations and ecological receptors identified during the site visit, a series of measures are described in this document to protect and enhance ecological features identified at the site and within the wider landscape, including:

- Bats - suitable foraging and commuting habitat is present immediately adjacent to the site;
- Birds - general nesting opportunities are supported within the site and around the site boundaries for a range of widespread bird species; and
- Invertebrates - suitable nesting and foraging habitat is present throughout the site and adjacent to the site.

3 Site enhancement measures

3.1. Following the construction of the new building, the retained land will be landscaped with new species rich grassland, wildflower and ornamental shrub beds, a pond and a water feature.

3.2. Bird, insect, and a bat box will be installed on the new building and boundary features.

3.3. Planting mixes will be selected to include native nectar and berry bearing species, of local provenance wherever possible, to provide suitable foraging, refuge and nesting habitat for nesting birds and invertebrates. The planting layout will also ensure structural diversity and connectivity to the wider landscape is maximised wherever possible.

3.4. Figure 3.1 below shows approximate suggested locations of new habitats and ecological features. As no detailed landscape design proposals were available at the time of writing this document, all locations are indicative and are subject to change.

Habitat Creation Measures

3.5. A detailed landscape design had not been produced at the time of writing this document. Following discussions with the owner and architect it is understood that new landscaping will include a combination of grassland, wildflower and shrub beds, water features and artificial bird, bat and insect boxes.

Species rich grassland

3.6. Areas of species rich grassland will be included into the new landscape proposals. Shade tolerant species should be used including *Fescues* and *Agrostis* species.

Trees

3.7. Planning consent has been granted for the mature trees in the adjacent property, which overhang the site, to be pollarded. This will improve the longevity of the trees while allowing increased light into the site to improve growing conditions for newly created habitats.

Ornamental shrubs

3.8. Ornamental shrub planting will be included into raised beds to the east of the site and along the boundary wall to the north of the site. Plants should be of varied structure and include climbers and woody shrubs to provide opportunities for nesting birds and hibernating insects. Species including guelder rose *Viburnum opulus*, honeysuckle *Lonicera periclymenum*, ivy *Hedera helix* and lavender *Lavandula sp.* will provide a varied food resource for birds and invertebrates using the site.

3.9. A drip feed irrigation system will be installed as part of the development to ensure all new planting is watered regularly.

Ponds and Water features

3.10. A pond will be created to the north of the site to provide a refuge and food source to invertebrates, amphibians and birds. The pond will be stepped across several levels to allow perching points for birds. Native aquatic plant species will be included in the design of the ponds such as water crowfoot *Ranunculuc aquatilis*, yellow iris *Iris pseudacorus*, water mint *Mentha aquatica* and marsh woundwort *Stachys palustris*.

3.11. A water feature will be installed to the south of the new building to provide a further resource for birds and invertebrates.

3.12. The Pond will be created in autumn or winter to allow it to fill naturally with rainwater. A run off system from the proposed new building will be installed to allow the pond to capture rainwater to reduce the risk of it drying out. Mains water should be avoided.

Protected Species

Bats

3.13. One Schwegler 2F (or similar) bat box will be installed on the new building. An indicative location of the bat box is shown on the Site Enhancement Plan (Figure 3.1).

3.14. There will be no fragmentation of habitats suitable for foraging and commuting bats on site during construction works and following completion. The mature trees adjacent to the site will be retained and protected.

3.15. Retained and adjacent habitats will not be directly illuminated either during construction or during the operational phases of the development. This is of particular relevance during the spring, summer and autumn months when bats are active. It is recommended that light spillage and glare as a result of the construction works is limited. This can be achieved by following accepted best practice (Fure, 2006; Institute of Lighting Engineers, 2009; Bat Conservation Trust, 2011) and undertaking the following:

- The level of artificial lighting should be kept to a minimum;
- Where this does not conflict with health and safety and/or security requirements, the site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
- Lighting that is required for security or safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise sensor activated lamps;
- LED or low-pressure sodium lights are a preferred option to high pressure sodium or mercury lamps;
- The use of UV filters or glass housings on lamps which filter out some of the UV content is also recommended (Lewanzik, 2017);
- Warm-white (i.e. long wavelength) should be used over blue-white (i.e. short wavelength) lights as the latter have a significant negative impact on bats (Stone, 2013);
- Lighting should be directed to where it is needed with minimal light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a shield or hood that directs the light below the horizontal plane; and
- Artificial lighting should not directly illuminate any habitats of value to commuting/foraging bats. Similarly, any newly planted linear features should not be directly lit.

Birds

3.16. Shrub planting undertaken as part of the landscaping design will provide additional food and nesting resources for birds.

3.17. At least three bird boxes will be installed on the new building or boundary features. Indicative locations of the bird boxes are shown on the Site Enhancement Plan (Figure 3.1). The bird boxes have already been created by the site owner and are in use in the current garden. The bird boxes will be relocated outside of nesting bird season (March to August inclusive).

Hedgehog

3.18. Three 'hedgehog highways' will be created in the boundary fences to allow hedgehogs to freely access the site for foraging and commuting. These will be created by including a 13cm by 13cm gap at the bottom of the boundary fences. Indicative locations are shown in the Site Enhancement Plan (Figure 3.1).

Invertebrates

3.19. The landscape planting throughout the site will ensure that there is sufficient structural diversity, and suitable species, to provide ideal conditions for the local invertebrate communities.

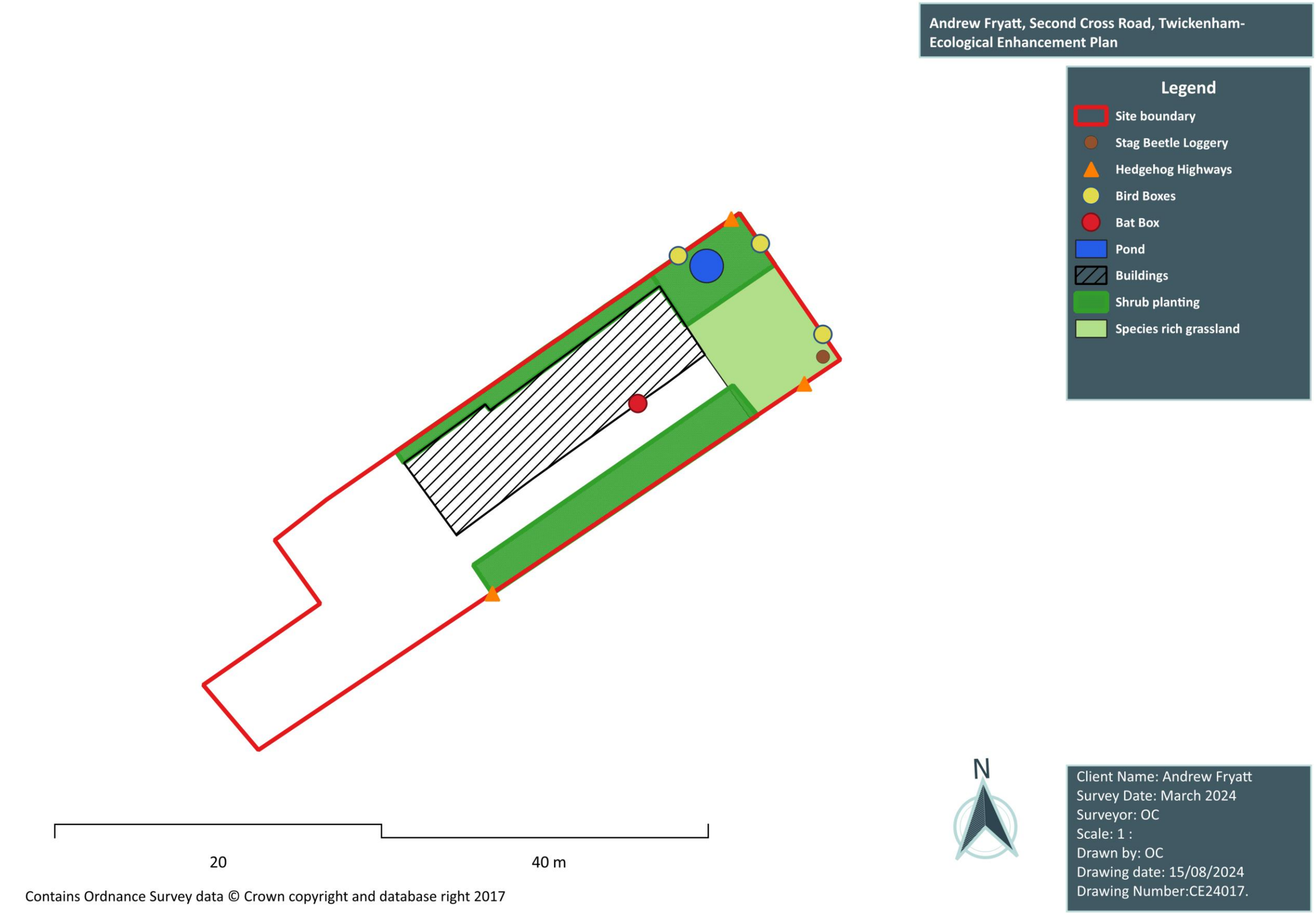
3.20. A stag beetle loggery will be created within the garden to provide a food source and egg laying site for stag beetles and other invertebrates using the surrounding habitats. The loggery will comprise of a pile of vertical logs from broadleaved trees sited at varied levels above ground and buried approximately 50cm below ground.

3.21. Indicative locations are shown in the Site Enhancement Plan (Figure 3.1).

Hedgehog Highway

Stag Beetle Loggery

Figure 3.1 – Ecological Enhancement Plan- Approximate location of new habitats and ecological features



4 Delivery and Long-term management

4.1. It is anticipated that the creation of the soft landscaping will take place towards the end of the construction period with the installation of the external bird and bat boxes, hedgehog highways and stag beetle loggery taking place at the same time.

4.2. Table 4.1 below sets out the approximate timings for the delivery of ecological enhancements and optimal dates for future management tasks. Timings are subject to change and will be updated accordingly.

Table 4.1 Timing of delivery of ecological enhancements

	2024								2025			
Task	May	June	July	Aug	Sep	Oct	Nov	Dec	Jan	Feb	Mar	Apr
Construction Phase												
Pond and water feature creation						X	X	X	X	X		
Post Construction												
Grassland creation (optimal period)					X	X					X	X
Shrub planting (optimal period)					X	X	X				X	X
Installation of bird and bat boxes, hedgehog highways and stag beetle loggery										X	X	X
	Annual Management (X=optimal month, 0=sub optimal month)											
Task	Jan	Feb	March	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Management task												
Replacement of any dead or diseased plants			X	X	X	0			X	0	0	
Cleaning of bird boxes	X	X							0	X	X	X
Pond maintenance- remove dead foliage and thin out underwater oxygenating plants							X	X				
Pond Maintenance – cleaning leaf litter (every 3 years)									X	X		

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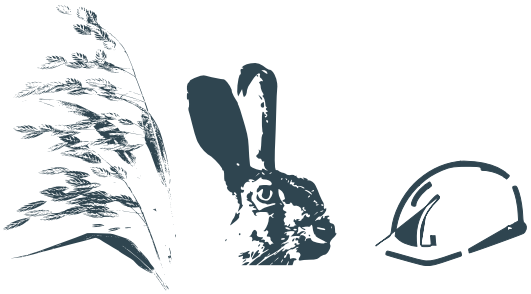

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