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Landscape and Ecology Management Plan

71 Oak Tree Road, Tilehurst

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Project No: P4750

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Report Summary

1. The Ecology Co-operation was commissioned by The Keen Partnership to provide a Landscape and Ecology Management Plan (LEMP) with regards to a proposed development at 71 Oak Tree Road, Tilehurst. This document outlines site-wide mitigation for habitats and protected species as well as targeted enhancement measures. It also includes the management objectives, responsibilities and maintenance schedules including remedial responsibilities, should they be necessary. It will be submitted to Reading Borough Council in order to discharge conditions 5 and 6 of the approved planning application (ref: 220221).
2. A Phase 1 Habitat assessment and Preliminary Ecological Appraisal of the site was undertaken in September 2017 by Derek Finnie Associates. No further surveys were recommended, though it was noted that tall ruderal habitat suitable for reptiles was forming.
3. Section 3 of this report outlines measures to protect the retained hedgerow through the installation of a buffer zone secured with Heras fencing.
4. Section 4 of this report details mitigation measures during construction and the operational phase of the development, including precautionary measures for breeding birds and safeguarding measures for badgers *Meles meles*.
5. Section 5 sets out the proposed habitat enhancement measures for the site, including, native hedgerows and native shrub planting, as well as bird and bat boxes.
6. Post construction management for the retained ecological features and proposed biodiversity enhancement features is detailed in full in Section 6 and a work schedule is provided in Section 7 outlining management responsibilities and remedial actions should they be necessary.
7. Site staff must be briefed prior to the commencement of construction on the importance of contacting an ecologist in the event that any wildlife is identified within the construction zone.

Document Control



Issue No	Author	Reviewer	Issue Date	Additions/alterations	Notes
Original	EB	PW	04/04/2023	Rev 04.04.23	
01	JH		27/04/2023	Updated as per ecologists comments	
02	PW		07/07/2023	Updated to replace use of the word 'should'.	
03	JH		13/07/2023	Updated as per feedback of David Brett.	

This report has been prepared by The Ecology Co-operation Ltd, with all reasonable skill, care and diligence within the terms of the Contract with the client. This report only becomes the property of the client once payment for it has been received in full.

We disclaim responsibility to the client and others in respect of any matters outside the scope of the above.

This report is confidential to the client, and we accept no responsibility of whatsoever nature to third parties to whom this report, or any part thereof, is made known. Any such party relies on the report at their own risk.



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1 INTRODUCTION

1.1 Purpose of the Report

The Ecology Co-operation was commissioned by The Keen Partnership to provide a Landscape and Ecology Management Plan (LEMP) with regards to a proposed development at 71 Oak Tree Road, Tilehurst. This document outlines site-wide mitigation for habitats and protected species as well as targeted enhancement measures. It also includes the management objectives, responsibilities and maintenance schedules including remedial responsibilities, should they be necessary. It will be submitted to Reading Borough Council in order to discharge conditions 5 and 6 of the approved planning application (ref: 220221).

All the prescribed mitigation measures described within this document will be issued to relevant works contractors to ensure that they are carried out in full. Implementation of this will be overseen by a suitable ecological consultancy, and the works contractor will be given contact details for an ecologist so that any issues can be resolved promptly.

1.2 Background to the proposed development

The site is located at 71 Oak Tree Road, Tilehurst, Reading, Berkshire RG31 6LA. The central grid reference for the site is SU 67004 74846. The location of the site is shown in Figure 1.

In 2017, the site was found to comprise a detached bungalow with converted garage, set in domestic gardens subject to clearance in the months previous. The site was dominated by a tall ruderal community developing on the recently cleared rear garden, as well as hardstanding and the buildings. The southern and eastern boundary of the site supported a mature, outgrown hedge with several standard trees.

The proposed development includes demolition of the existing dwelling at 71 Oak Tree Road, followed by the construction of three replacement dwellings, together with associated hard and soft landscaping works (see Figure 2). The developer has confirmed that the installation of external artificial light is not proposed and therefore this document has been amended to remove guidance relating to management of this feature.



Figure 1. An aerial image showing the location of the application site. The approximate boundary of the proposed construction zone is outlined in red. Image produced courtesy of Google maps (Map data ©2022 Google).



Figure 2. Approved proposed plans for the development at 71 Oak Tree Road. Provided courtesy of The Keen Partnership (dwg 8748-201 REV A), 06/02/2023.



1.3 Summary of previous survey work

A Phase 1 Habitat Survey and Preliminary Ecological Appraisal¹, completed by Derek Finnie Associates in September 2017 did not identify the potential for any protected species, though it was noted that habitat suitable for reptiles was forming.

1.4 Management Plan Strategic Vision

The aims and objectives for the landscape and biodiversity elements of this development project are as follows:

- Retain and protect valuable existing 'green assets' where possible, including the southern and eastern boundary hedgerow.
- Creation of new green assets, including: native hedgerows and native shrub.
- Minimise impacts and ensure compliance with legislation on key species: bats (commuting and foraging), breeding birds, badgers and reptiles.
- Provide targeted and appropriate habitat enhancement features for bats and birds.

2 LEGAL PROTECTION

Legal protection applying to relevant bird, mammal and herpetofauna species is detailed in Appendix 1 of this report. This includes both national and European legislation that protects badgers, bats, dormice, reptiles, and breeding birds.

3 PRE-CONSTRUCTION MITIGATION MEASURES

3.1 Retained hedgerow

The southern and eastern boundary hedgerow is to be retained as part of the development. There is the potential for this feature to be physically damaged during the construction phase. To prevent this, these retained habitats will be protected from root compaction through the installation of barrier fencing outside the Root Protection Areas (RPA's). Semi-permanent fencing will then be erected, such as Heras fencing, which will prevent construction vehicles from coming too close to these areas and disturbing birds through noise and vibrations. This will also be fitted with a membrane that reduces dust deposition onto this hedgerow.

¹ Derek Finnie Associates (2021). 71 Oak Tree Road, Reading - Ecological Assessment

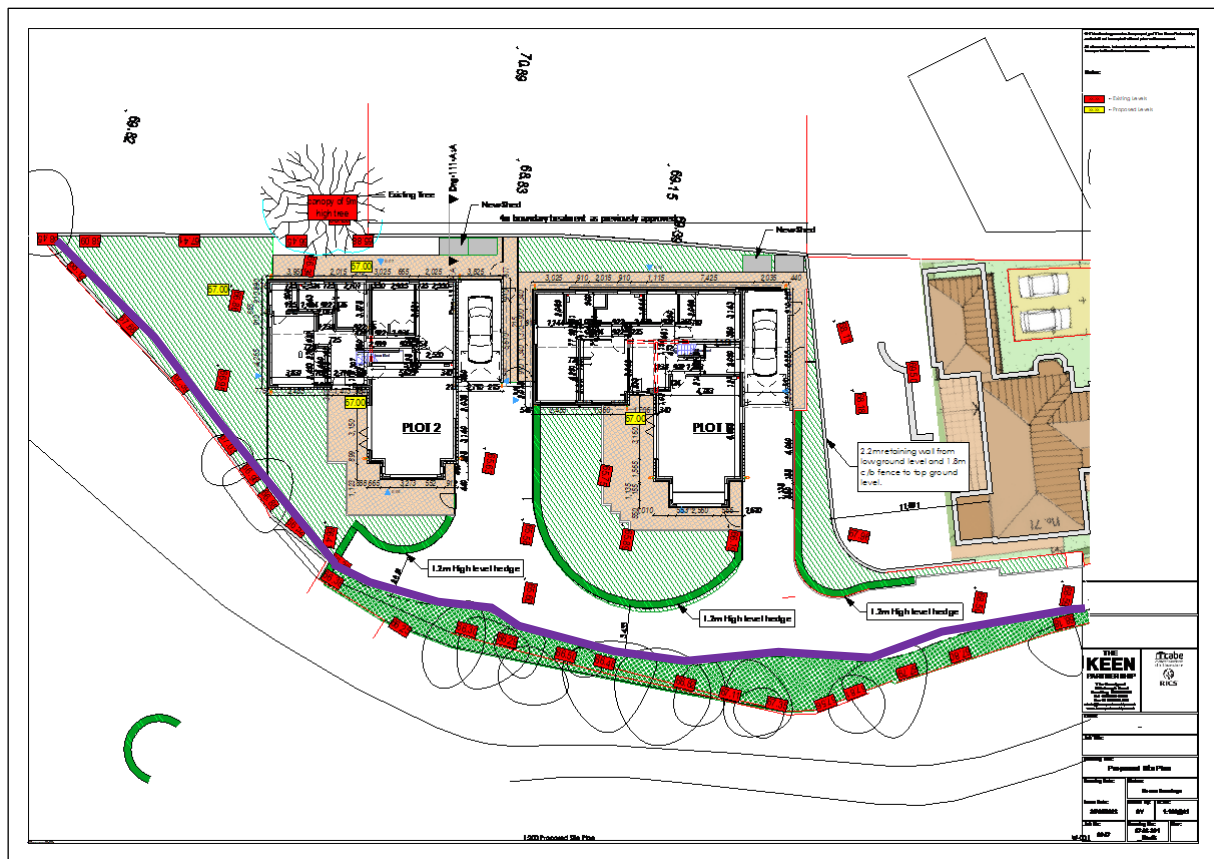


Figure 3. View of Heras fencing location (purple line), Existing vegetation illustrated with dark green cross hatch and black circles, proposed vegetation illustrated grassland) and proposed 1.2m hedge (dark green lines). Fencing drawn on the previously approved and updated to illustrate the existing vegetation levels. Image produced courtesy of The Keen Partnership Drawing number 8748-201_RevB dated 26.04.2023.

4 CONSTRUCTION PHASE MITIGATION MEASURES

4.1 Badgers

Though no setts were observed on the site or in habitats bordering the site, there are habitats of value in close proximity to the site, and this species may therefore commute across the site. As such, in order to safeguard this species, the following precautionary mitigation measures must be put in place during the construction phase to minimise any potential harm to badgers:

- no food or waste will be left out overnight and tools will be locked away after each day;
- any excavations more than 50cm deep will either be covered up overnight or have a wooden plank put in place to provide an escape route;
- chemicals and any hazardous waste must be stored securely;
- and the use of loud machinery must cease two hours before sunset.

4.2 Breeding birds

Though the boundary hedgerow is to be retained, should any vegetation need cutting back to facilitate the development, this must be conducted outside of the nesting bird season (typically 1st March to 31st August), unless features are first searched by a suitably qualified ecologist and no active nests are found.



5 BIODIVERSITY ENHANCEMENT MEASURES

5.1 Native hedgerows/ shrub planting

New native, species-rich hedgerows and shrub areas will be planted across the site. All trees/shrubs must be sourced from UK stock only. This will provide increased foraging and commuting habitat for bats plus nesting areas for birds. Two types of hedgerow will be established, with both native beech *Fagus sylvatica* hedging and native hedgerow illustrated within the submitted landscape plan by David Williams Landscape Consultancy (project No 0456). These hedge trees must be planted in two lines, with three trees in front and two behind, with the native hedgerows comprising at least five of the following species:

- Hawthorn *Crataegus monogyna*
- dogwood *Cornus sanguinea*;
- hazel *Corylus avellana*;
- hornbeam *Carpinus betulus*;
- holly *Ilex aquifolium*;
- field maple *Acer campestre*;
- wild privet *Ligustrum vulgare*;
- alder buckthorn *Frangula alnus*;
- guelder rose *Viburnum opulus*;
- spindle *Euonymus europaeus*; and
- field or dog rose *Rosa arvensis* / *R. canina* (to be planted in addition to five woody species)

Note that the evergreen screening must not be planted with cherry laurel *Prunus laurocerasus* as this is an invasive species but could instead include holly and yew *Taxus baccata*,

5.2 Enhancements for Bats

To provide a net positive benefit for bats within the proposed development, no less than one bespoke bat roosting feature or access point will be incorporated into the fabric of each of the three new buildings. The roost features to be installed have been provided separately by the Keen Partnership and plans illustrating these have been submitted (application reference: 221494)^{2, 3, 4, 5}. These drawings are to be read in conjunction with this report. As the availability of bat roosts and tubes is at times constrained by demand, some suitable alternative options have also been illustrated, should a substitute product need to be used. These features will be positioned facing away from the prevailing westerly wind and close to existing flight-lines and habitat features of value to foraging and commuting bats, such as the boundary hedgerows. Suitable features and boxes are shown in Figure 4, a mix of which will provide suitable roosting opportunities for a range of bat species. Installation of these features must be overseen by a bat licenced ecologist.

² Plot 1 Proposed First Floor Plan – 9096-104 0

³ Proposed Front Elevation – 9748-207

⁴ Proposed Rear Elevation – 9748-208

⁵ Plot 2 Proposed Elevations – 9096-110

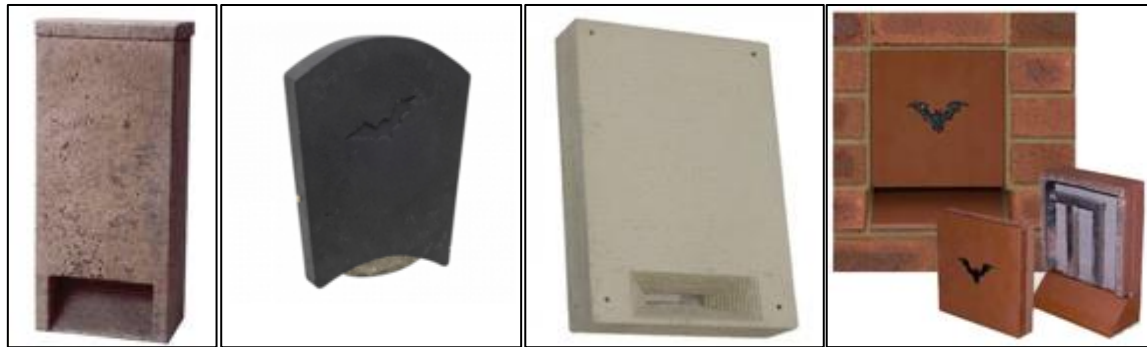


Figure 4. Left to right: Schwegler 2FR Bat Tube, Beaumaris Woodstone Bat Box, 1WI Schwegler Summer and Winter Bat Box and the Ibstock Enclosed bat box 'C' as sold by NHBS.

5.3 Enhancements for Nesting Birds

To enhance the site for swifts *Apus apus* and starlings *Sturnus vulgaris*, which are associated with urban and suburban habitats, boxes and integral features for these species will be incorporated within the fabric of the new buildings and attached to external surfaces. The boxes that will be utilised shown below in Figure 5 but note that other boxes of a comparable design and quality may need to be substituted based on availability.

The Swift Nest Box system must be positioned at least 5m above the ground with no obstructions to access and the position of these boxes have been provided separately by the Keen Partnership. These boxes must be fitted at least 3m to 4m above the ground level with a clear flight path on the southern or eastern face of the buildings, facing away from prevailing winds.



Figure 5. Two variations of the Cambridge Swift nest box system

5.4 Enhancement confirmation

All proposed ecological enhancements listed above are to be checked after installation by a suitable qualified ecologist to confirm they are installed correctly and as intended. Following inspection a letter report and photographs shall be submitted by the ecologist to the planning authority as evidence of correct implementation.

6 POST CONSTRUCTION MANAGEMENT PLAN

6.1 Native hedgerow and shrub

Hedgerows and shrub planting will annually be checked for signs of disease and more frequently while new ones are establishing. If disease is identified advice must be sought from an arboriculturist



regarding the appropriate method of treatment.

Trees and shrubs should be allowed to grow unhindered where possible. However, it may be necessary to trim back trees and shrubs in some circumstances, such as where there is a risk to health and safety, or for maintenance of the ecological feature. Cutting of shrubs and trees must only be timed outside the bird nesting season (1st March to 31st August). Where possible they shouldn't be cut until February, so that valuable winter food associated with fruiting shrubs/trees is retained for over-wintering birds.

6.2 *Other*

The integral bat roosting features in buildings will be largely maintenance-free, and apart from an annual check that they remain in position, so are bat boxes in trees. Any damaged boxes are to be replaced like for like. However, an important component to these habitat features will be managing the expectations of residents and other users of the development site, including dealing with any fears, questions, or unauthorized interference. It is recommended that prospective buyers of these properties are made aware of the legal protection afforded to bats and birds, and their obligations as owners. Bat boxes must only be maintained by a suitably qualified/licensed ecologist, as they may support roosting bats.

Bird nesting boxes will be emptied of nesting material in winter to prevent the build-up of parasites where they can be safely accessed.



7 WORK SCHEDULE

Table 1 below provides the timetable to aid correct timing of the annual 'green asset' management at the site.

Table 1. Annual Work schedule for development.

Action for green assets	Jan	Feb	Mar	April	May	June	July	Aug	Sep	Oct	Nov	Dec
Check trees and shrubs for signs of any disease							X	X	X			
Cutting of hedgerows and shrubs		X										
Keeping tree saplings well-watered	X	X	X	X	X	X	X	X	X	X	X	X
Inspection of tree guards and fences	X	X	X	X	X	X	X	X	X	X	X	X
Replacement planting of failed trees or shrubs	X	X	X								X	X
Inspection of bat and bird boxes	X	X									X	X
Clearance of old bird nests from bird boxes											X	X



8 COMPETENCIES, STANDARD AND SPECIFICATIONS OF WORKS

- All tree works are to be undertaken by a suitably qualified arboriculturist.
- The installation of bat boxes is to be undertaken or overseen by a suitably qualified ecologist.
- A site inspection of all green assets post-construction will be undertaken by a suitably qualified ecologist.

Should you need any further advice on the information provided above, please do not hesitate to contact The Ecology Co-op.



APPENDIX 1 – Wildlife Legislation and National Planning Policy

Introduction

The following text is intended for general guidance only and does not constitute comprehensive professional legal advice. It provides a summary of the current legal protection afforded to wildlife in general and certain species. It includes current national planning policy relevant to nature conservation.

The ‘Birds Directive’, ‘Habitats Directive’ and ‘Natura 2000 Sites’.

The Council Directive 79/409/EEC on the Conservation of Wild Birds (“the Birds Directive”) sets a framework for the protection of wild birds. Under the directive, several provisions are made including the designation and protection of ‘Special Protection Areas’ (SPAs) – areas which support important bird populations, and the legal protection of rare or vulnerable species.

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora (the “Habitats Directive”) directs member states of the EU to take measures to maintain favourable conservation status of important habitats and species. This requires the designation of a series of sites which contain important populations of species listed on Annex II of the directive (for example Bechstein’s bat *Myotis bechsteinii*, Barbastelle bat *Barbastella barbastellus* and white-clawed crayfish *Austropotamobius pallipes*). Together with ‘Special Areas of Conservation’ (SPAs), designated under the Birds Directive, SACs form a network across Europe of protected areas known as the ‘Natura 2000 sites’.

Annex IV lists species in need of more strict protection, these are known as “European Protected Species (EPS)”. All bat species, common dormice *Muscardinus avellana*, otter *Lutra lutra* and great crested newts *Triturus cristatus* are examples of EPS that are regularly encountered during development projects.

The ‘Habitats Regulations’

The Conservation of Habitats and Species Regulations 2010 (the “Habitats Regulations”) is the principle means of transposing the Habitats Directive and the Birds Directive, and updates the Conservation (Natural Habitats, &c.) Regulations 1994 (“the 1994 regulations”) in England and Wales.

‘Natura 2000’ sites receive the highest level of protection under this regulation which requires that any activity within the zone of influence of these sites would be subject to a Habitats Regulations Assessment (HRA) by the competent authority (e.g. planning authority), leading to an Appropriate Assessment (AA) in cases where ‘likely significant effects on the integrity of the site are identified.

For European Protected Species, Regulation 41 makes it a criminal offence to;

- Deliberately capture, injure or kill any such animal;
- Deliberately disturb wild animals of such species;
- Deliberately take or destroy their eggs (where relevant);
- Damage or destroy a *breeding or resting place* of such an animal;
- Possess, control, sell or exchange any live or dead animal or plant, of such species;
- Deliberately pick, collect, cut, uproot or destroy a wild plant of such species.

The Habitats Directive and Habitats Regulations provide for the derogation from these prohibitions for specific reasons provided certain conditions are met. An EPS licensing regime allows operations that



would otherwise be unlawful acts to be carried out lawfully. Natural England is the licensing Authority and, in order to grant a license, ensures that three statutory conditions (sometimes referred to as the ‘three derogation tests’) are met:

- A licence can be granted for the purposes of “preserving public health or safety or for other imperative reasons of overriding public interest including those of a social or economic nature and beneficial consequences of primary importance for the environment” (Regulation 53 (2) (e).
- A licence can be granted if “there are no satisfactory alternatives” to the proposed action.
- A licence shall not be granted unless the action authorised will not be detrimental to the maintenance of the population of the species concerned at a favourable conservation status in their natural range.

Wildlife and Countryside Act (1981) as amended.

This remains one of the most important pieces of wildlife legislation in the UK. There are various schedules to the Act protecting birds (Schedule 1), other animals including insects (Schedule 5), plants (Schedule 8), and control of invasive non-native species (Schedule 9).

Under the Wildlife and Countryside Act (WCA) 1981, all wild birds (with the exception of those listed on Schedule 2), their eggs and nests are protected by law and it is an offence to:

- Take, damage or destroy the nest of any wild bird while it is in use or being built.
- Take or destroy the egg of any wild bird.
- Disturb any bird listed on Schedule 1, while it is nest building, or at a nest with eggs or young, or disturb the dependant young of any such bird.

Schedule 5 lists all non-avian animals receiving protection to a varied degree. At its strongest, the Act makes it an offence to intentionally kill, injure or take any wild animal listed on Schedule 5, and prohibits interference with places used for shelter or protection, or intentionally disturb animals while occupying such places. Examples of species with *full protection* include all EPS, common reptile species, water vole *Arvicola amphibius*, white-clawed crayfish *Austropotamobius pallipes* and Roman snail *Helix pomatia*. Other species are protected from sale, barter or exchange only, such as white letter hairstreak *Satyrrium w-album*.

The Act makes it an offence to intentionally pick, uproot or destroy any plant or seed, and sell or possess any plant listed on Schedule 8. It is also an offence to intentionally uproot any wild plant not listed on Schedule 8 unless authorised [by the land owner]. Species on Schedules 5 and 8 are reviewed every 5 years when species can be added or removed.

Measures for the prevention of spreading non-native species which may be detrimental to native wildlife is included in the Act, which prohibits the release of animals or planting of plants into the wild of species listed on Schedule 9 (for example Japanese knotweed *Fallopia japonica*, Himalayan balsam *Impatiens glandifera*, New Zealand Pygmyweed *Crassula helmsii*).

The Wildlife and Countryside Act 1981 (as amended) also prohibits certain inhumane methods of traps and devices for the capture or killing of wild animals and certain additional methods such as fixed trap, poisoning with gas or smoke, or spot-lighting with vehicles for killing species listed on Schedule 6 of the Act (this includes all bat species, badger, otter, polecat, dormice, hedgehog and red squirrel).

Natural Environment and Rural Communities (NERC) Act (2006)

The NERC Act (2006) created the statutory nature conservation body Natural England, and places a statutory duty on all public bodies, including planning authorities, under Section 40, to take, or promote the taking by others, steps to further the conservation of *habitats and species of principal importance for*



the conservation of biodiversity in England (commonly referred to as the 'Biodiversity Duty'). This duty extends to all public bodies the biodiversity duty of Section 74 of the Countryside and Rights of Way (CROW) Act 2000, which placed a duty only on Government and Ministers. Section 41 of the NERC Act lists the habitats and species of principle importance. This includes a wide range of species from mosses, vascular plants, invertebrates through to mammals and birds. It originates from the priority species listed under the UK Biodiversity Action Plan (UK BAP) with some omissions and additions.

Protection of Badgers Act (1992)

The Badger *Meles meles* is afforded specific legal protection in Britain under the Protection of Badgers Act (1992), and Schedule 6 of the Wildlife and Countryside Act 1981 (as amended) (see above).

Under this legislation, it is a criminal offence to:

- intentionally kill, injure, take, possess, or cruelly ill-treat, a Badger, or to attempt to do so;
- interfere with a sett, by damaging or destroying it;
- to obstruct access to, or any entrance of, a Badger sett; or
- to disturb a Badger when it is occupying a sett.

A licence may be obtained from Natural England to permit certain prohibited actions for a number of defined reasons including interference of a sett for the purpose of development, provided that a certain number of conditions are met. Note that licenses are not normally granted for works affecting badgers between the end of November and the start of July.

National Planning Policy Framework

The National Planning Policy Framework (NPPF 2021)⁶ sets out the Government's view on how planners should balance nature conservation with development and helps ensure that Government meets its biodiversity commitments with regard to the operation of the planning system.

Paragraph 179b, which states that council policies should "*promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.*" The Office of the Deputy Prime Minister (ODPM) Circular 06/2005, 2005)⁷. In accordance with the NPPF, it is important that developments should contribute to and enhance the natural and local environment by:

- Minimising impacts on existing biodiversity and habitats,
- Providing net gains in biodiversity and habitats, wherever possible,
- establishing coherent ecological networks that are more resilient to current and future pressures.

⁶ HM Government (2018). National Planning Policy Framework. Department for Communities and Local Government. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/1005759/NPPF_July_2021.pdf

⁷ HM Government (2005) ODPM Circular 06/05 Government Circular: *Biodiversity and Geological Conservation – Statutory Obligations and their Impact within the Planning System*. Available online at: https://assets.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/7692/147570.pdf.



UK Post-2010 Biodiversity Framework

The UK Biodiversity Action Plan (UK BAP), first published in 1994, was the UK's response to the commitments of the Rio Convention on Biological Diversity (1992) until 2010, when the UK BAP was replaced by the UK Post-2010 Biodiversity Framework. This framework covers the period 2011 to 2020 and forms the UK government's response to the new strategic plan of the United Nations Convention on Biodiversity (CBD) published in 2010. This promotes a focus on individual countries delivering target for protection for biodiversity through their own strategies.

The most recent biodiversity strategy for England, 'Biodiversity 2020: A strategy for England's wildlife and ecosystem services' was published by Defra (2011), and a progress update was provided in July 2013 (Defra 2013).

'Biodiversity 2020' builds on the Natural Environment White Paper for England – 'The Natural Choice', published on 7 June 2011, and sets out the strategic direction for biodiversity policy for the next decade. Biodiversity 2020 deliberately avoids setting specific targets and actions for local areas and species because the Government believes that local people and organisations are best placed to decide how to implement the strategy in the most appropriate way for their local area or situation.

Birds of Conservation Concern (BoCC)

In 1996, the UK's leading non-governmental bird conservation organisations listed the conservation status of all bird species in the UK against a series of criteria relating to their population size, trends and relative importance to global conservation. The lists, known as the 'Red', 'Amber' and 'Green' lists (in order of decreasing concern) are used to inform key conservation policy and decisions. The lists are reviewed every 5 years and are a useful reference for determining the current importance of a particular site for birds. The most recent review was undertaken in 2015 (Eaton et al, 2015), which provides an up to date assessment of the conservation status of birds in the UK.

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Wildlife and Countryside Act (WCA) (1981). HMSO London. Available at:
<http://www.legislation.gov.uk/ukpga/1981/69/contents>



Appendix 2 – Submitted and Approved Landscape Plan

PLANTING NOTES

1. Plant material to conform to the National Plant Specification. All plant stock to originate from within the UK. All plant stock, plant handling and planting to be undertaken in accordance with the following British Standard Specifications and Codes of Practice:
- BS 3936:1992 Part1 Nursery Stock – Specification for trees and shrubs;
 - BS 3936:1981 Part10 Nursery Stock – Specification for ground cover plants;
 - BS 4428:1989 – Code of Practice for General Landscape Operations (excluding hard surfaces);
 - BS8545:2014 – Trees from Nursery to Independence in the landscape – Recommendations; and
 - The Code of Practice 2002 (HTA).

2. Topsoil to be fertile with maximum 35% clay content and 5% minimum organic content, pH 5.8 - 7.5 and to be free of perennial weeds, weed seeds and contamination. Maximum stone content 20% (20mm-+ particle size), maximum size of stones 50mm in any direction.
- Existing topsoil to be ameliorated and/or screened, if necessary; to achieve this specification.
- Imported topsoil to be to BS 3882: Multi-Purpose Grade, from an approved source, and to accord with the above specification.

3. Cultivation of all planting areas within the root protection areas of existing trees beneath the canopies of existing trees is to be undertaken by hand using handheld tools only, taking care to avoid ground compaction or damage to tree roots. The use of tracked or wheeled machinery (including rotavators), must not be used and any time. Levels must not be raised (particularly by the addition / spreading of topsoil associated with any turfing or grass seeding works) or lowered, in any way unless specially approved by the Local Authority.

TREES:

4. Trees to be planted at correct depth in square pits 2 to 3 times width of root ball / root spread and at shallow depth same as depth of root ball / root spread with spiked bottom full depth of fork (but not cultivated) to relieve any compaction and assist drainage backfilled with local topsoil and if required, mixed with peat free organic tree planting compost and slow release fertiliser. Trees to be supported by 1 no. 100mm x 3000mm softwood timber stake and 1 No. adjustable tree tie

5. As appropriate, all trees are to be fitted with 'Greenleaf "Root-rain Urban" irrigation pipe and inlet, or similar approved, sized as appropriate to aid watering operations.

6. The Contractor is to ascertain the location of all sewers and services prior to carrying out any tree planting to avoid these routes or existing services.

PLANTING BEDS:

7. Planting beds to have a minimum depth of 450mm topsoil over 150mm broken up ground with all stones over 50mm removed. Soil conditioner: Sanitized and stabilised compost to BSI PAS 100. Apply 50mm depth even coverage and incorporate into topsoil during cultivation operations, to a minimum depth of 150mm. Compost to be Compost Association certified, or from an approved supplier conforming to this specification. If no local supplies are available alternative organic peat free compost may be specified, subject to the Landscape Architect's approval.

8. Hedgerow plants to be planted in pits 150mm wider and deeper than root spread backfilled with excavated topsoil/compost, mixed with 'Sierrablenn Flora' slow release fertiliser, quantity in accordance with manufacturer's recommendations. Hedge plants to be planted in staggered rows 500 mm apart at centres specified in schedule.

9. All planting beds (apart from marginal plants) to be mulched with matured coniferous bark, with an even particle size between 15 - 65mm, to a minimum depth of 75mm over weed free soil after completion of all planting and watering operations. Bark mulch is to be free from pests, diseases, fungus and weeds; and with no fines or dust. Source and sample of bark mulch to be approved.

GRASS AREAS

10. Grass areas are to have a minimum depth of 150mm topsoil brought to a fine tilth all stones over 40mm (25mm for lawns), in any direction removed. Areas should be uniformly firmed. Apply pre-seeding fertiliser (e.g. British Seed Houses BS12), prior to grass seeding, in accordance with manufacturer's recommendations. Do not apply to wildflower areas.
- Grass seed mix to rear garden areas to be: GSS Cottage Lawn with micro clover mix, sown at a rate of 23g/m sq in equal sowing in transverse directions
 - Turf to be good quality lawn turves, to conform to BS 3936: 1998, free from undesirable grasses and weeds. Turfing operations to be carried out in accordance with the NBS Landscape Specification, Q30 - Seeding/Turfing, Clauses 430 and 440, the dressing to joints to be finely screened compost sand / topsoil.

ONGOING MANAGEMENT AND MAINTENANCE NOTES:

1. Maintenance operations to be carried out as specified until planting becomes established (year 5 after planting).
2. Trees - Check stakes and ties and adjust if necessary, in summer and winter. Remove stakes when no longer required, i.e. after 3 years. Prune out damaged branches or deadwood, cutting back so as not to affect branch collar. Progressively raise canopies of new trees to provide clearance for vehicles and pedestrians. Pleached Lime trees to be maintained a minimum of 2 metres above the height of the (2m) retaining wall.

3. Shrubs - Weed control measures to continue until canopy of shrubs is closed. Weeds are to be cleared by hand or by application of translocated herbicide, with inspections made regularly through the growing season. Prune back any badly damaged shrubs to sound growth. Cut back plants adjacent to paths and access

ways where necessary, retaining a balanced shape. Clear litter and debris from planted areas and cut leggy growth hard back to promote bushy growth.

4. Watering - Trees to be watered on weekly basis during growing season (April - October) for first two years. Watering to be from above and via pipe to ensure soaking of ground until field capacity of the soils is reached. After which, during periods of dry weather apply sufficient water to maintain healthy growth. Allow, at each operation, watering to field capacity. As a guide, in periods of dry weather apply sufficient water to maintain healthy growth allowing 10Lt/m2 to planting beds, 25Lt per Standard tree, 50Lt per heavy standard tree and 75Lt per extra heavy standard tree at each operation.

5. Re-firming - Ensure that all trees and shrubs are firmly bedded in the ground after strong winds, frost heave or other disturbances.

6. Protection/Reinstatement - Regularly inspect all planting and grassed areas, e.g. once a month, for any pest damage or vandalism/damage caused by others. Any damaged to be reported to the Employer and rectified in the next available season by replacement planting or reseeded/ turfing and protective measures if required.

PLANTING SCHEDULE

TREE PLANTING			
Abbr.	Species	Girth/Size (cm)	Centres
ACC	Acer campestre 'Streetwise'	H' Std 12 - 14 cm	As Shown
STO	Sorbus torminalis	Std 8 - 10 cm	As Shown
TLG	Tilia cordata 'Greenspire' - Pleached	Ex H Std 14 - 16 cm	As Shown

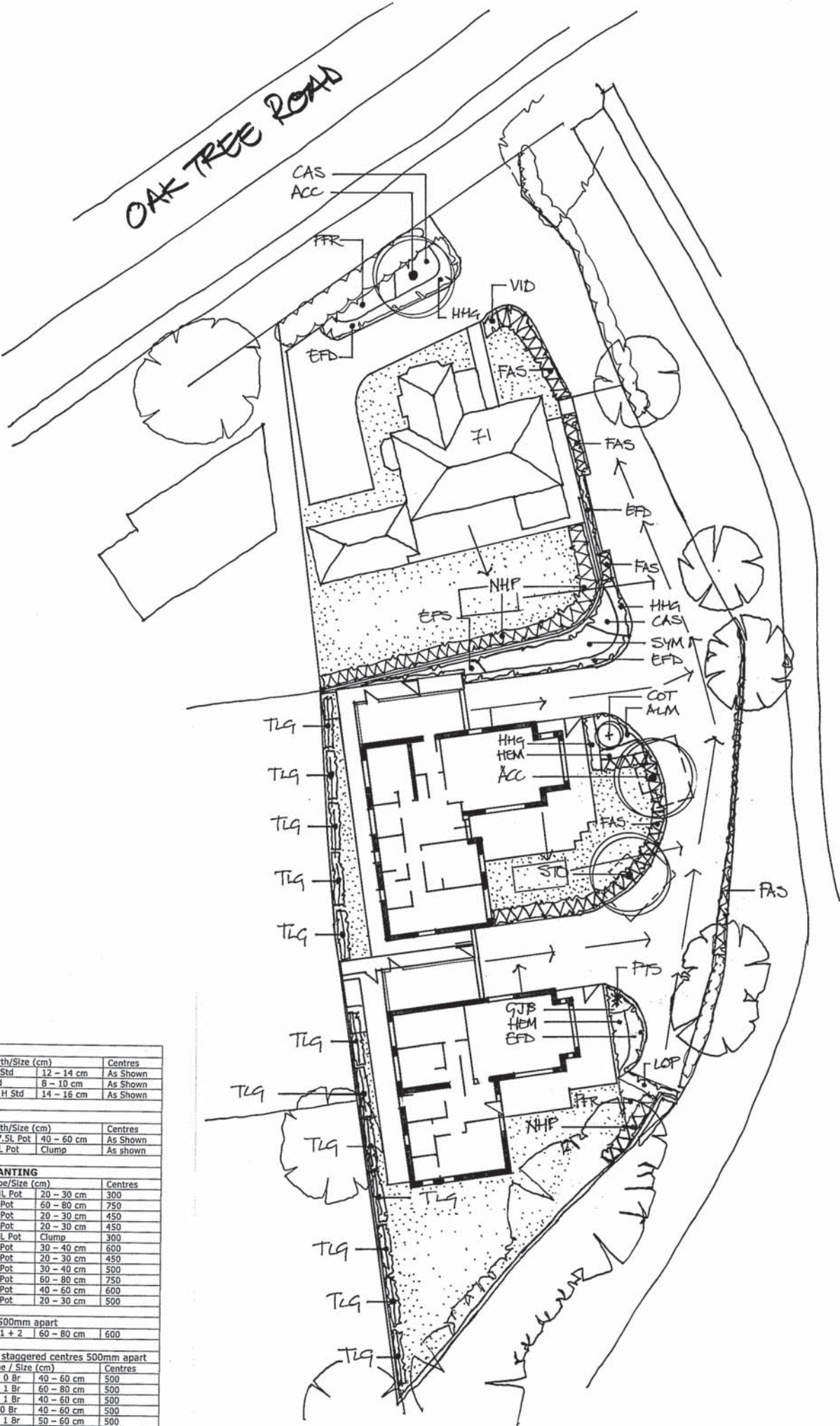
LARGE / SPECIMEN SHRUB PLANTING			
Abbr.	Species	Girth/Size (cm)	Centres
COT	Cotinus coggygria 'Royal Purple'	5-7.5L Pot 40 - 60 cm	As Shown
PTS	Phormium tenax 'Sundowner'	10L Pot Clump	As shown

SHRUBS / HERBACEOUS/GROUND COVER PLANTING			
Abbr.	Species	Type/Size (cm)	Centres
ALM	Alchemilla mollis	3-4L Pot 20 - 30 cm	300
CAS	Cornus alba 'Sibirica Variegata'	3L Pot 60 - 80 cm	750
EPD	Euonymus fortunei 'Darts Blanket'	2L Pot 20 - 30 cm	450
EFS	Euonymus fortunei 'Silver Queen'	2L Pot 20 - 30 cm	450
GJB	Geranium 'Johnsons Blue'	0.5L Pot Clump	300
HEM	Hebe 'Majorie'	3L Pot 30 - 40 cm	600
HHG	Hedera helix 'Glacier'	1L Pot 20 - 30 cm	450
LOP	Lonicera pileata	3L Pot 30 - 40 cm	500
PFR	Phoradendron x fraseri 'Red Robin'	5L Pot 60 - 80 cm	750
SYM	Symphoricarpos x chenaultii 'Hancock'	2L Pot 40 - 60 cm	600
VID	Viburnum davidii	3L Pot 20 - 30 cm	500

HEDGE PLANTING Planted at staggered centres 500mm apart			
FAS	Fagus sylvatica	TS 1 + 2 60 - 80 cm	600

NATIVE SHRUB / HEDGE PLANTING Planted at staggered centres 500mm apart				
Abbr.	Species	%	Type / Size (cm)	Centres
NHP	Acer campestre	10	1 + 0 Br 40 - 60 cm	500
	Cornus sanguinea	10	1 + 1 Br 60 - 80 cm	500
	Corylus avellana	20	1 + 1 Br 40 - 60 cm	500
	Crataegus monogyna	30	1 + 0 Br 40 - 60 cm	500
	Euonymus europaeus	10	1 + 1 Br 50 - 60 cm	500
	Lonicera periclymenum	2	2L Pot 25 - 30 cm	500
	Rosa canina	8	1 + 1 Br 40 - 50 cm	500
	Viburnum opulus	10	1 + 1 Br 40 - 60 cm	500

NOTE:	
H' Std	= Heavy Standard Tree stock
Std	= Standard Tree stock
Pot	= Container grown plants
BR	= Bare Rooted / Bagged plants
TS 1+1	= Transplant / Years

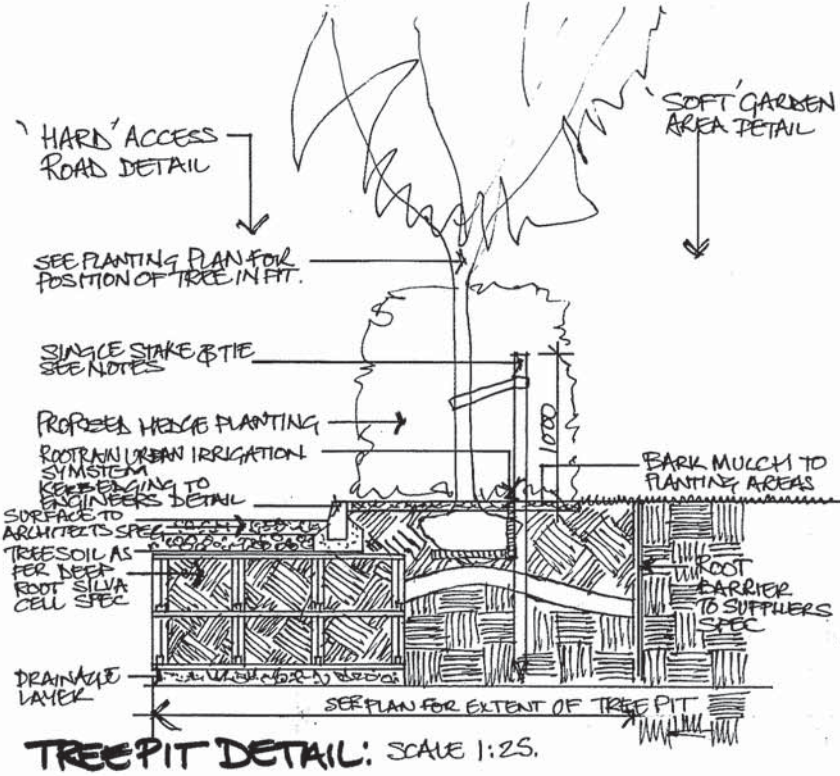


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Revision	Date	Initial
A - Revisions to suit LPA comments	13-02-2023	DHW

LEGEND

	EXISTING VEGETATION RETAINED
	PROPOSED TREE PLANTING
	PROPOSED PLEACHED TREE PLANTING
	SPECIMEN SHRUB PLANTING
	PROPOSED SHRUB PLANTING
	PROPOSED HEDGEROW PLANTING
	PROPOSED GRASSED AREAS
	DRAINAGE AND SERVICE ROUTES



Project:
PROPOSED DEVELOPMENT AT No.71 OAK TREE ROAD, READING, BERKSHIRE RG31 6LA

Drawing Title:
LANDSCAPE PROPOSALS PLAN

Status: **PLANNING**

Date: 20-07-2022 Scale: 1:200 @ A1 size 1:400 @ A3 size Drawing No: 0456

Drawn by: DHW Revision: A



Further reading:

Buglife (2011) *A review of the impact of artificial light on invertebrates*.

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CPRE (2014) *Shedding Light: A survey of local authority approaches to lighting in England*. Available
at: <http://www.cpre.org.uk/resources/countryside/dark-skies/item/3608-shedding-light>

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Institution of Lighting Professionals (2011) *Guidance Notes for the Reduction of Obtrusive Light*
GN01:2011. Available at: <https://www.theilp.org.uk/resources/free-resources/>