

Document No. 1264CEMP

Residential Development

60 Lowbrook Lane

Tidbury Green, Solihull B90 1QS

Construction and Ecological Management Plan

27th November 2023

Author: Richard Billingsley BSc (Hons) Ecology



DJOGS LTD Landscape Architecture and Ecology Services

www.djogs.co.uk

79 Green Lane, Pelsall, Walsall, WS3 4PD, Tel: 01922 442665, e-mail: richard@djogs.co.uk

CONTENTS

1.0 INTRODUCTION	5
1.1 Brief	5
1.2 Related Documents	6
1.3 Site Location and description	6
1.4 Phase One Habitat Survey (Ecolocation March 20200	8
1.5 Proposed Development	9
1.6 Proposed drainage strategy	11
2.0 CONSTRAINTS AND CONSIDERATIONS	12
2.1 Local Designated	12
2.2 Protected Species Locally Present	12
2.3 Applicable Wildlife Legislation	13
3.0 AIMS AND OBJECTIVES	16
3.1 Aims	16
3.2 Objectives	16
4.0 ACTION PLANS	17
4.1 Method Statement Objectives	17
4.2 Risk Assessment	17
4.3 Required Mitigation	19
4.4 Species Summary Table	20
4.5 Construction Exclusion Zone	22
4.6 Pre-commencement Checks	23
4.7 Onsite Method	24
5.0 CONSTRUCTION METHODOLOGY AND SUMMARY OF SCHEDULE OF WORKS	25
5.1 Table of Summarized Schedule of Works with Suggested Timings	25
APPENDIX A: BIBLIOGRAPHY and REFERENCES	26

1.0 INTRODUCTION

1.1 Brief

The Clients have instructed DJOGS Ltd to provide a Construction Ecological management Plan for the consented residential development to the rear of 60 Lowbrook Lane, Tidbury Green, Solihull B90 1QS. The development planning application (PL/2022/01898/PPFL) for nine dwellings was consented by Solihull MBC with conditions on 13th September 2023. Condition 10 requires:

10. The development hereby permitted, including site clearance work, shall not commence until a Construction Environmental Management Plan (CEMP) has been submitted to and approved in writing by the Local Planning Authority. In discharging this condition, the Local Planning Authority expects to see details concerning appropriate working practices and safeguards for bats, badgers, hedgehogs, great crested newts and nesting birds that are to be employed whilst works are taking place on site. The CEMP should also include working practices relating to invasive species. The agreed Construction and Environmental Management Plan shall thereafter be implemented in full.

Reason: To safeguard the ecological value of the site in accordance with Policy P10 of the Solihull Local Plan.

This document is produced in order to provide a working method to discharge the condition and in so doing inform the construction method to avoid disturbance to protected and priority wildlife.

1.2 Related Documents

This Management Plan is produced with reference to several related documents and reports notably

Preliminary Ecological Appraisal Midland Ecology (3rd August 2022)

Arboricultural Impact Assessment Braemar Arboriculture Limited (2nd March 2023)

Landscape and Ecological Enhancement Scheme DJOGS 910.1

Hard Surface Plan DJOGS 1264.3

Planting Plan DJOGS 1264.2

Biodiversity Impact Assessment DJOGS 910BIA

Full Planning Decision Notice PL/2022/01898/01898/PPFL

1.3 Site Location and description

The property is a paddock field and garden attached to the property known as 60 Lowbrook Lane, Tidbury Green, Solihull B90 1QS. The property is situated north of the Lowbrook Lane. The L shaped site is bounded by long suburban gardens of neighbouring properties off Lowbrook Lane to the east and west. New residential developments are situated to the north and west of the site.

The site is situated within Tidbury Green, a village within Solihull Metropolitan Borough 1.5km south-west of Dickens Heath; 2km south-east of Hollywood and 3.8km south-west of Shirley town centre.

The site consists of a domestic property with a large garden/paddock area to the rear. There is one main building with three outbuildings (brick built shed; temporary building housing a woodwork shop and a small stable). Most of the site is amenity grassland with trees and derelict hedges. The site is enclosed within domestic wooden fences which limits movement of wildlife into/out of the site.

The site is bounded by new housing development to the north and west of the site.

There are a number of mature trees, including three common oak within the site positioned close to the boundaries.

Neighbouring gardens to the east have significant tree cover that is listed as broad-leaved woodland in the National Forestry Inventory



Figure One: Location of Site (left) and 3D google earth image (right)

1.4 Phase One Habitat Survey (Midland Ecology 2022)

A phase one habitat survey was conducted by Midland Ecology in order to inform the development in August 2022 (see figure 1.4, right)

Summary: The survey area was dominated by amenity grassland, with areas of introduced shrub, hedgerows, scattered trees and three buildings present.

Amenity Grassland: The site was dominated by this habitat type. This habitat type was dominated by Perennial ryegrass *Lolium perenne*, with a variety of species identified throughout the habitat type. East of B2 (location shown as TN2), the ground had recently been disturbed, likely by a vehicle, therefore there were small areas of bare ground. Within these small areas of bare ground, there was a wider variety of plant species. To the south of B3, there was also the remnants of a bonfire.

Introduced Shrub: Within the south of the site, there were several areas of introduced shrub. There was an area lining the south-eastern boundary and an area between B1 & B2. Species identified include two species of *Cotoneaster* *Cotoneaster* sp., *Crocsmia* species *Crocsmia* sp., *Rhododendron* species *Rhododendron* sp.

Buildings and Hardstanding: Within the south of the site, there was a gravel track leading from the driveway of 60 Lowbrook Lane, up into the site, ending at B2.

Within the site, there were two buildings (numbering starts at B2, as B1 was a small building south of the site boundary).

Appendix 1: Phase 1 Habitat Map (current site conditions)



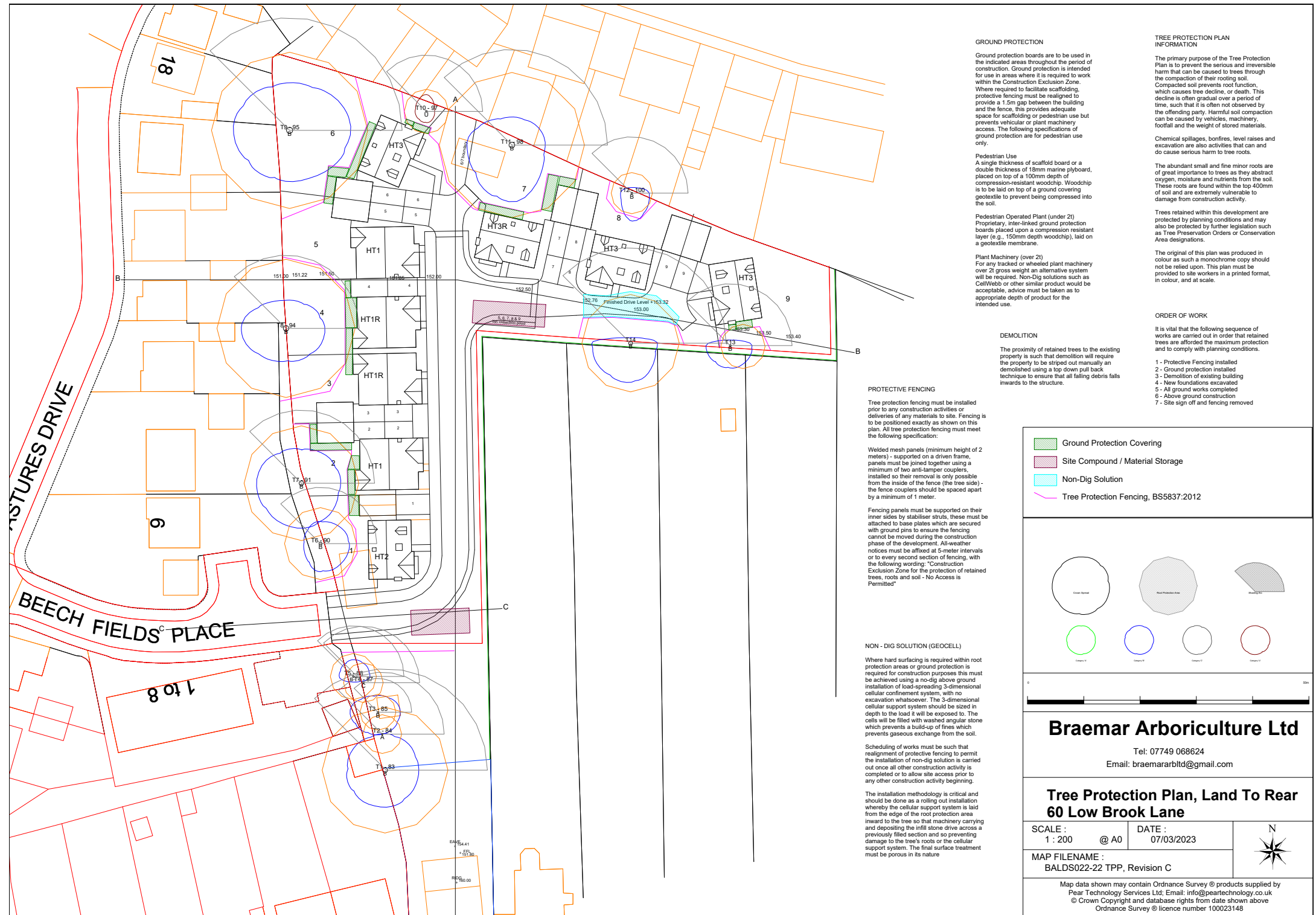
Trees and Hedgerows: *Within the site, there were two hedgerows, one within the northern boundary and one within the western. Within the northern boundary, the east of the hedgerow was well established with very little gaps between the different tree species, however the west of the hedgerow had more gaps between the tree species and the trees were more spaced out. Within the western hedgerow, there were four mature Oak trees with various tree species within their understorey, this hedgerow again had very little gaps between trees. Species present within these hedgerows include Ash, Hawthorn, Holly, Bramble, Elder, Hazel, Nettle, Hedge Bindweed and Oak. Within these hedgerows, there were also two mature trees that had been felled: there was an Ash within the north-west corner of the site (TN6) and an Oak tree in the north-east corner of the site (TN4).*

*Within the eastern corner of the site, there was an Apple (*Malus domestica*) tree and Elder tree surrounded by Bramble, Ash saplings, Nettle, Bracken, Broadleaved Dock *Rumex obtusifolius* and other Amenity Grassland species mentioned above (TN3). Within the eastern boundary, there was a fencing panel missing within the north-east corner, this meant there was access and egress into the adjacent garden.*

The south-east boundary consisted of fencing with trees and vegetation within the adjacent gardens growing over. In places this boundary was fairly overgrown particularly in the corner adjacent to TN3 and the western point of this boundary.

1.5 Arboricultural Impact Assessment Braemar Arboriculture Ltd

The Arboricultural Impact Assessment and Tree Protection Plan were provided by the project Arboricultural consultants. These provide methods for avoiding harm to the retained trees during the construction period. Further and updated details have been conditioned within condition 7 of the planning consent document. The AIA found 14no trees potentially impacted by the development. The below preliminary Tree protection Plan illustrates the size, position, and root protection areas of retained trees with proposed positions of tree protection fencing and temporary ground cover. These are provided as guidance only, the final details of tree protection will be contained within the documents submitted in order to discharge condition 7.



1.6 Consented Development

The Client has consent for the development of the site to provide nine new detached dwellings with associated works. Djogs Ltd have provided the following plans for the development of the landscape:

Landscape and Ecological Enhancement

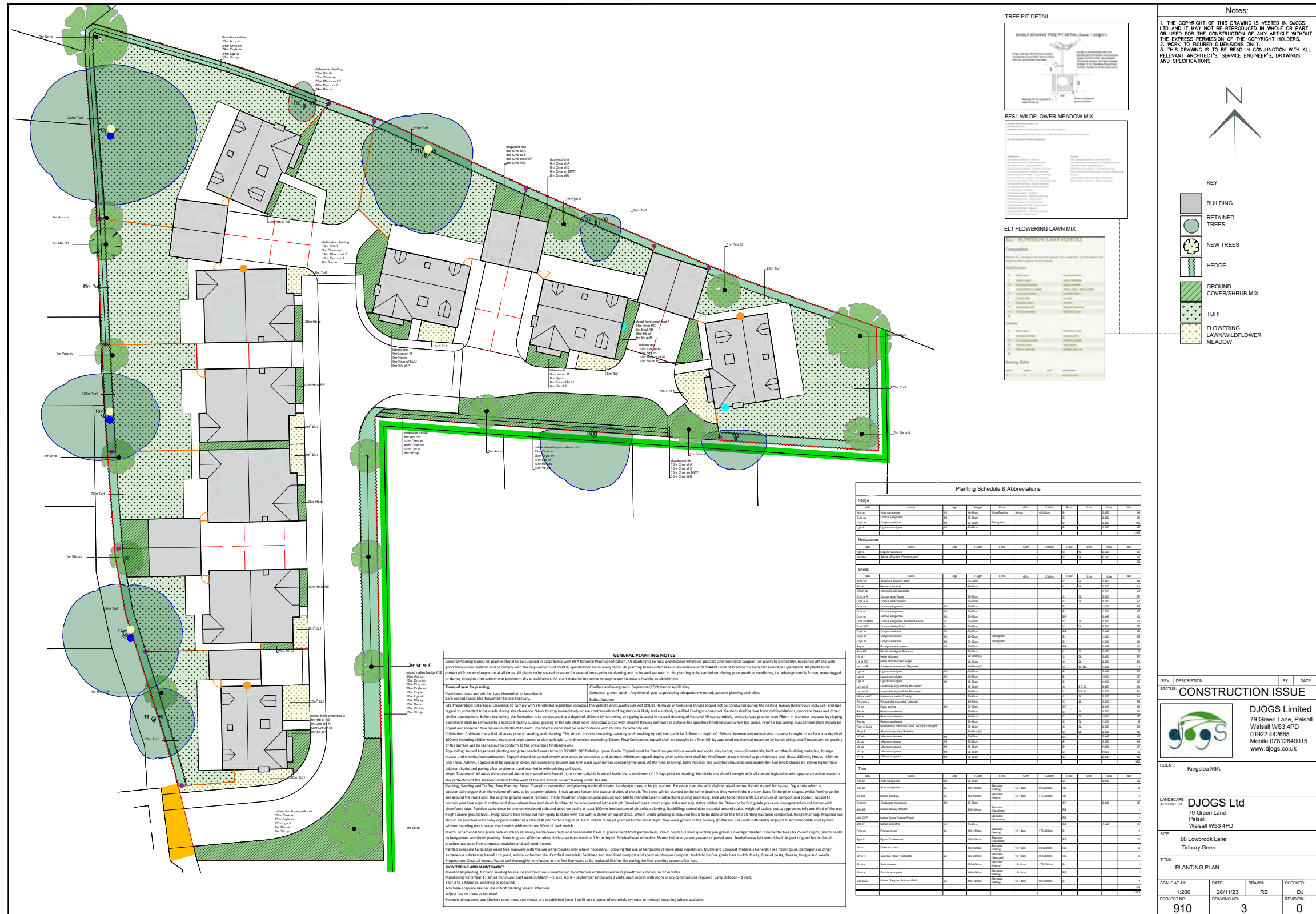
Scheme 910.1 rev 5



Hard Surface Plan 910.2



Planting Plan 910.3



Notes:

1. THE COPYRIGHT OF THIS DRAWING IS VESTED IN DJOGS LTD AND IT MAY NOT BE REPRODUCED IN WHOLE OR PART OR USED FOR THE CONSTRUCTION OF ANY ARTICLE WITHOUT THE EXPRESS PERMISSION OF THE COPYRIGHT HOLDERS.
2. WORK TO FIGURED DIMENSIONS ONLY.
3. THIS DRAWING IS TO BE READ IN CONJUNCTION WITH ALL RELEVANT ARCHITECT'S, SERVICE ENGINEER'S, DRAWINGS AND SPECIFICATIONS.

KEY

- BUILDING
- RETAINED TREES
- NEW TREES
- HEDGE
- GROUND COVER/SHRUB MIX
- TURF
- FLOWERING LAWN/WILDFLOWER MEADOW

Planting Schedule & Abbreviations

Code	Name	Age	Height	Form	Stock	Colours	Row	Col	Qty	Qty
EL1	Plantain	C1	100-120cm	Plantain	100-120cm	Green	1	1	1	1
EL1	Plantain	C1	100-120cm	Plantain	100-120cm	Green	1	1	1	1
EL1	Plantain	C1	100-120cm	Plantain	100-120cm	Green	1	1	1	1

GENERAL PLANTING NOTES

General Planting Notes: All plant material to be supplied in accordance with NFA National Plant Specification. All planting to be local provenance wherever possible and from local supplier. All plants to be healthy, hardened-off and with good fibrous root systems and to comply with the requirements of BS5836 Specifications for Nursery Stock. All planting to be undertaken in accordance with BS4543 Code of Practice for General Landscaping Operations. All plants to be protected from wind exposure at all times. All plants to be soaked in water for several hours prior to planting and to be well watered in. No planting to be carried out during poor weather conditions, i.e. when ground is frozen, waterlogged, or during droughts, hot conditions or persistent dry or cold winds. All plant material to receive enough water to ensure healthy establishment.

MONITORING AND MAINTENANCE

Monitor all planting, turf and seeding to ensure soil moisture is maintained for effective establishment and growth for a minimum of 12 months. Mowing will start Year 1 (but at minimum) last week in March - 1 cut, April - September (inclusive) 3 cuts, each month with more in dry conditions as required, Early October - 1 cut. Year 2 to 3 Mow once, watering as required. Any losses replace like for like in first planting season after loss. Adjust trees on trees as required. Remove all supports and anchors once trees and shrubs are established (year 2 to 3) and dispose of materials by reuse or through recycling where available.

CLIENT: Kingslea MIA

LANDSCAPE ARCHITECT: DJOGS Ltd
79 Green Lane
Pelsall
Walsall WS3 4PD

SITE: 60 Lowbrook Lane
Tidbury Green

TITLE: PLANTING PLAN

SCALE AT A1: 1:200

DATE: 28/11/23

DRAWING NO: 910

DESIGN: RB

CHECKED: DJ

REVISION: 0

STATUS: CONSTRUCTION ISSUE

REV: DESCRIPTION BY DATE

DJOGS Limited
79 Green Lane, Pelsall
Walsall WS3 4PD
01922 442665
Mobile 07812640015
www.djogs.co.uk

2.0 CONSTRAINTS AND CONSIDERATIONS

2.1 Protected Species Locally Present

The planning consent states the following species as requiring consideration within this management plan based on recommendations within the Midlands Ecology Preliminary Ecological Appraisal

Local Planning Authority expects to see details concerning appropriate working practices and safeguards for bats, badgers, hedgehogs, great crested newts and nesting birds that are to be employed whilst works are taking place on site.

The PEA found the following likelihoods of presence:

Nest birds - High

Hedgehog – moderate

Bats (foraging) – moderate

Bats (roosting) – low

Great crested newts – low

Badger – low

2.2 Invasive non-native species

Five invasive non-native species were recorded during the ecological survey: 2no Cotoneaster Cotoneaster sp., Crocosmia species Crocosmia sp., Rhododendron species, Variegated Yellow Archangel

2.3 Applicable Wildlife Legislation

This document is concerned with those species specified which may pass through the site or be using the hedgerow namely bats, badgers and breeding birds during the construction phase. These species are protected under the Wildlife and Countryside Act (1981) (as amended). In addition:

Bats

All bat species, their breeding sites and resting places are fully protected by law - they're European protected species.

You may be able to get a licence from Natural England if you cannot avoid disturbing them or damaging their habitats, or if you want to survey or conserve them.

What you must not do

You're breaking the law if you do certain things including:

- deliberately capture, injure or kill bats
- damage or destroy a breeding or resting place
- obstruct access to their resting or sheltering places
- possess, sell, control or transport live or dead bats, or parts of them
- intentionally or recklessly disturb a bat while it's in a structure or place of shelter or protection
- Either or both of the following could happen if you're found guilty of any offences: you could be sent to prison for up to 6 months or you could get an unlimited fine

Activities that can harm bats

Activities that can affect bats include:

- renovating, converting or demolishing a building
- cutting down or removing branches from a mature tree
- repairing or replacing a roof
- repointing brickwork
- insulating or converting a loft
- installing lighting in a roost, or outside if it lights up the entrance to the roost
- removing 'commuting habitats' like hedgerows, watercourses or woodland
- changing or removing bats' foraging areas
- using insecticides or treating timber

In many cases you should be able to avoid harming the bats or damaging or blocking access to their habitats. You'll need an expert to do a bat survey. You can find one using the:

Chartered Institute of Ecology and Environment Management directory

Environmental Data Services directory

The survey will show what type, how many and how the bats are using the building or area so you can plan to avoid harming them.

Bat licences

If you cannot avoid harming bats or their habitats, you can apply for a mitigation licence from Natural England.

You need a licence from Natural England for other activities, including:

- surveying
- research
- possessing bats
- some conservation activities
- Find out what's involved for construction that affects protected species.

Ecological consultants can register to use a class licence that may avoid the need for an individual licence for certain low impact activities.

Bat roosts

Contact the bat helpline if you think you have a bat roost in or near your house or place of worship and you want to do small scale works or pest control have any concerns about the bats

They will give you advice and where appropriate can arrange for one of Natural England's volunteer bat roost visitors to inspect your property. This is a free service for small-scale building works that do not need planning permission.

Badger

Badgers are also covered by the Protection of Badgers Act 1992

(1) A person is guilty of an offence if, except as permitted by or under this Act, he wilfully kills, injures or takes, or attempts to kill, injure or take, a badger.

(2) If, in any proceedings for an offence under subsection (1) above consisting of attempting to kill, injure or take a badger, there is evidence from which it could reasonably be concluded that at the material time the accused was attempting to kill, injure or take a badger, he shall be presumed to have been attempting to kill, injure or take a badger unless the contrary is shown.

(3) A person is guilty of an offence if, except as permitted by or under this Act, he has in his possession or under his control any dead badger or any part of, or anything derived from, a dead badger.

(4) A person is not guilty of an offence under subsection (3) above if he shows that— (a) the badger had not been killed, or had been killed otherwise than in contravention of the provisions of this Act or of the Badgers Act 1973; or (b) the badger or other thing in his possession or control had been sold (whether to him or any other person) and, at the time of the purchase, the purchaser had had no reason to believe that the badger had been killed in contravention of any of those provisions. Taking, injuring or killing badgers. 1973 c. 57. 2 c. 51 Protection of Badgers A

(5) If a person is found committing an offence under this section on any land it shall be lawful for the owner or occupier of the land, or any servant of the owner or occupier, or any constable, to require that person forthwith to quit the land and also to give his name and address; and if that person on being so required wilfully remains on the land or refuses to give his full name or address he is guilty of an offence.

All birds, their nests and eggs are protected by above stated Wildlife and Countryside Act (1981) and it is thus an offence (with certain exceptions) to:

- intentionally kill, injure or take any wild bird
- intentionally take, damage or destroy the nest of any wild bird whilst it is in use or being built
- intentionally take or destroy the egg of any wild bird
- have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the Act or the Protection of Birds Act 1954
- have in one's possession or control any egg or part of an egg which has been taken in contravention of the Act or the Protection of Birds Act 1954
- use traps or similar items to kill, injure or take wild birds
- have in one's possession or control any bird of a species occurring on Schedule 4 of the Act unless registered, and in most cases ringed, in accordance with the Secretary of State's regulations (see *Schedules*)
- intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Nesting Birds

All wild bird species, their eggs and nests are protected by law. You must always try to avoid harming birds or to use measures which do not kill or injure them before considering taking harmful action.

In most cases you should be able to avoid harming wild birds by timing your work to avoid the breeding season or using a range of methods that deter but don't harm them

In exceptional cases the law allows certain exemptions to permit legal activities (such as a development with planning permission) and where avoiding harm isn't possible. You may also be able to get a licence from Natural England for certain activities if you need to remove wild birds because they're causing problems. If wild birds are causing you problems, there are ways to deal with them legally. It's sometimes legal to hunt some species of bird, such as game birds.

What you must not do

You're breaking the law if you:

- intentionally kill, injure or take wild birds
- intentionally take, damage or destroy a wild bird's nest while it's being used or built

- intentionally take or destroy a wild bird's egg
- possess, control or transport live or dead wild birds, or parts of them, or their eggs
- sell wild birds or put them on display for sale
- use prohibited methods to kill or take wild birds

Some birds, known as 'schedule 1 birds', eg barn owls, have extra legal protection. For these bird species it's also an offence to do the following, either intentionally or by not taking enough care:

- disturb them while they're nesting, building a nest, in or near a nest that contains their young
- disturb their dependent young

You could get an unlimited fine and up to 6 months in prison for each offence if you're found guilty.

Activities that can harm birds

These activities can affect wild birds, particularly during breeding season:

- trimming or cutting trees, bushes, hedges and rough vegetation
- renovating, converting or demolishing a building
- creating disturbance, eg noise, lighting and vibration
- taking actions to prevent problems, eg shooting birds or removing nests

Great Crested Newts

Great crested newts are a European protected species. The animals and their eggs, breeding sites and resting places are protected by law.

You may be able to get a licence from Natural England if you're planning an activity and can't avoid disturbing them or damaging their habitats (ponds and the land around ponds).

What you must not do

Things that would cause you to break the law include:

- capturing, killing, disturbing or injuring great crested newts deliberately
- damaging or destroying a breeding or resting place
- obstructing access to their resting or sheltering places (deliberately or by not taking enough care)
- possessing, selling, controlling or transporting live or dead newts, or parts of them
- taking great crested newt eggs

You could get an unlimited fine and up to 6 months in prison for each offence if you're found guilty.

Activities that can harm great crested newts

Activities that can affect great crested newts include:

- maintaining or restoring ponds, woodland, scrub or rough grassland
- restoring forest areas to lowland heaths
- ploughing close to breeding ponds or other bodies of water
- removing dense vegetation and disturbing the ground
- removing materials like dead wood piled on the ground
- excavating the ground, for example to renovate a building
- filling in or destroying ponds or other water bodies
- Building and development work can harm great crested newts and their habitats, for example if it:
 - removes habitat or makes it unsuitable
 - disconnects or isolates habitats, such as by splitting it up
 - changes habitats of other species, reducing the newts' food sources
 - increases shade and silt in ponds or other water bodies used by the newts
 - changes the water table
 - introduces fish, which will eat newt eggs or young
 - increases the numbers of people, traffic and pollutants in the area or the amount of chemicals that run off into ponds

In many cases you should be able to avoid harming the newts, damaging or blocking access to their habitats by adjusting your plans. Contact an ecologist for more information about how to avoid harming the newts.

If you can't avoid this, you can apply for a mitigation licence from Natural England. You'll need expert help from an ecologist:

3.0 Aims and Objectives

This management plan aims to provide sufficient information to satisfy all legal responsibilities in regard to protected habitats and species as a minimum during the construction and operation periods

3.1 Aims

- a. To ensure there are no contraventions to wildlife legislation during the demolishing of the existing building and site clearance through the killing, harm or disturbance to protected species
- b. To inform the SBC Ecology Team of the proposed onsite procedures prior to a planning decision being made as it will form an integral part of the Habitats Regulations Assessment (HRA)

3.2 Objectives

- I. Risk assess proposals against wildlife (protected habitats and species) receptors as identified within sections 2.1 and 2.2
- II. Identify significant risks of harm or disturbance and specify suitable avoidance methods during the construction period
- III. Provide reasonable avoidance methods (RAMS) during the construction period
- IV. Define construction exclusion zones

4.0 METHOD STATEMENT

The PEA provides the following recommendations:

Bat surveys

As bats are known to utilise the building for either roosting or foraging, the proposed works are to be undertaken following a suitable method statement. This is to specify precautionary working methods, the level of supervision required, timing restrictions (if any) and whether the work requires a mitigation licence from Natural England. The agreement of such a method statement with the local planning authority, and its subsequent implementation, should be made a condition of any planning consent granted.

Should any works to the Oak trees with potential roosting features (TN5, TN7-10) be required, then an aerial inspection by a licensed bat worker is to be undertaken in advance of any such works being permitted.

Depending on the outcome of that survey, further surveys (dusk emergence and dawn re-entry) may be necessary in order to establish the presence/likely-absence of bats, and to characterise any roost(s) present.

These trees are all scheduled for retention, and so this risk only arises should pruning or other works be required. As it is not considered realistic to know at the design stage whether or not such works will be required, no further bat surveys of trees are recommended prior to planning determination.

The retained trees should be protected during works, in line with BS 5837: 2012 Trees in relation to design, demolition and construction. There is to be no loss or major severance (>10m) of tree-lines. The use of artificial lighting is to follow the protocols outlined in the Institute for Lighting Engineers document "Guidance Note 08/18 "Bats and Artificial Lighting in the UK: Bats and the Built Environment Series" (2018)" to minimise disturbance and sky-glow across the site; and onto the boundaries in particular.

Breeding bird surveys

Further surveys for birds are not considered to be necessary, provided that the following avoidance measures can be accommodated:

The tree-lined and hedgerow boundaries are likely to be the most valuable to nesting birds, and should be retained as far as possible. All trees due to be retained should be protected in line with BS 5837: 2012 Trees in relation to design, demolition and construction.

Nesting birds may be present in the buildings, trees and other vegetation during the bird breeding season (March to August inclusive). If demolition or vegetation removal is planned during these months, then a prior check (within a 24-hour period preceding works) for nesting birds should be undertaken by an ecologist. Any active nests that are found must not be moved until fledglings have dispersed.

Badger

Although no badger activity was observed on the site at the time of the survey, activity patterns of this species can change over a short time. It is recommended that all contractors involved in the project be briefed regarding the potential for badgers on site. Should any evidence of badger presence be found at any stage during works, then all works must cease, and the advice of a suitably qualified Ecologist sought.

Hedgehog

The surveys required to firmly establish presence or likely absence of hedgehogs on site are considered excessive, given the ease and affordability of avoiding/mitigating/compensating impacts on this species.

Clearance of suitable hibernation areas should be undertaken by hand, outside of the hibernation period (September - March). A hedgehog hibernation box should be installed within a suitable habitat (e.g. woodland). These can be easily constructed, or can be purchased.

Great Crested Newts

As there is limited potential for the works to impact great crested newts, recommendations must be made in order to avoid, mitigate or compensate for those impacts (in that order of preference). In this instance, as the likelihood of presence on site is moderate but the likelihood of impacts is low, and since any such impacts are easily avoided; the most appropriate recommendation is for supervision of the works by a suitably

qualified Ecologist. The appointed suitably qualified Ecologist will need to be present during the works to oversee any vegetation clearance or removal of brash piles on site. Should any wildlife be encountered, then this should be carefully moved, by hand, to a safe location away from the works area.

Invasive species

Works on site; particularly the transport of soil/materials off site, have the potential to cause the spread of a Schedule 9 species, which could constitute a criminal offence. Contractors must be briefed regarding suitable avoidance measures to prevent the spread of this species, and specialist advice should be sought.

4.1 Method Statement Objectives

The objectives of this method statement are to:-

- I. Risk assessing proposals against wildlife (protected habitats and species) receptors as identified within sections 2.1 and 2.2
- II. Identify significant risks of harm or disturbance and specify suitable avoidance methods during the construction period
- III. Provide reasonable avoidance methods (RAMS) during the construction period
- IV. Define construction exclusion zones

4.2 Risk Assessment

Receptor	Conservation Value and sensitivity	Receptor base line condition	Impacts (before control/mitigation measures)	Construction Phase impact assessment	Occupational phase impacts	Occupational Phase impact assessment
Bat species	European Protected Species (EPS) highly sensitive	Several species recorded within 3km of the site. Evidence of feeding within the building. No evidence of roosting	Disturbance of foraging/commuting bats by artificial lighting	Moderate adverse and nil beneficial	Security/safety lighting	Moderate adverse and nil beneficial
Badger	National	Demolition potential for disturbance or killing of badger unlikely as defined within protected species survey.	Badgers are highly mobile mammals and may move into or through new territory and are therefore potentially present within the construction area. The badgers may become trapped within trenches and excavations during the construction period	Moderate adverse and nil beneficial	Lighting	negligible
Hedgehog	Priority species	Recorded within 2km of the site. Existing habitat near to site	Hedgehog have extensive feeding routes which may potentially include the construction area. The hedgehogs may become trapped within trenches and excavations during the construction period. Hedgehogs may hide under stored materials during the day and be vulnerable to disturbance and injury	Moderate adverse nil beneficial	Potential for outdoor material storage	Moderate adverse nil beneficial

Great Crested Newt	European Protected Species (EPS) UKBAP species highly sensitive	Recorded within 2km of the site. Existing terrestrial habitat near to site	Amphibians feed within terrestrial habitat may potentially include green infrastructure near the construction area. Species may become trapped within trenches and excavations during the construction period. Species may hide under stored materials during the day and be vulnerable to disturbance and injury	Negligible adverse nil beneficial	Potential for outdoor material storage	Nil adverse nil beneficial
--------------------	---	--	---	-----------------------------------	--	----------------------------

4.3 Required Mitigation

Receptor	Conservation Value and sensitivity	Receptor base line condition	impacts (before control/mitigation measures)	Construction Phase impact assessment	Required Mitigation	Residual impact assessment
Bat species	European Protected Species (EPS) highly sensitive	Several species recorded within 3km of the site. Evidence of feeding within the building. No evidence of roosting	Demolition Phase disturbance of roosting bats	Very High adverse	Pre-commencement roosting bat check by suitably licensed bat ecologist. Contact Midland Ecology 01215170841 info@midlandecology.co.uk IF A POSITIVE RESULT NO WORK TO COMMENCE UNTIL A STRATEGY HAS BEEN AGREED WITH SMBC ECOLOGIST AND NE LICENCE ISSUED IF REQUIRED	Negligible
			Construction Phase Disturbance of foraging/commuting bats by artificial lighting during construction	Moderate adverse and nil beneficial	Day working only during bat activity periods (May to October). Artificial lighting to be in full compliance with guidance note 8: Bats and artificial lighting (ILT/BCT)	Negligible adverse
			Operation: Disturbance of foraging/commuting bats by artificial security and safety lighting	Moderate adverse and nil beneficial	Artificial lighting to be in full compliance with guidance note 8: Bats and artificial lighting (ILT/BCT) e.g. LED lights no lighting of surrounding vegetation and focused beams to avoid leakage upwards	Negligible adverse and nil beneficial
Badger	National	Demolition potential for disturbance or killing of badger unlikely as defined within preliminary ecological survey.	Construction: Badgers are highly mobile mammals and may move into or through new territory and are therefore potentially present within the construction area. The badgers may become trapped within trenches and excavations during the construction period	Moderate adverse and nil beneficial	Pre-commencement checks and RAMS during demolition and construction periods	negligible

Nesting Birds	National	Demolition and vegetation clearance disturbance of nests	Construction: Birds can nest in a variety of places including ground, trees, shrubs and hedges and in buildings. Nesting season is recognised as between 1 st March and 31 st August inclusive	Moderate Adverse	Clear outside of nesting season. If clearance has to commence within nesting season a preclearance check will be required	negligible
Hedgehog	Priority species	Recorded within 2km of the site. Existing habitat near to site	Construction: Hedgehogs have extensive feeding routes which may potentially include the construction area. The hedgehogs may become trapped within trenches and excavations during the construction period. Hedgehogs may hide under stored materials during the day and be vulnerable to disturbance and injury	Moderate adverse nil beneficial	RAMS including hand removal of waste piles and artificial cover objects (ACOs) storage of materials above ground level on pallets and infilling of trenches, covering and/or provision of escape ramps	negligible
			Operational: Potential for outdoor material storage	Moderate adverse nil beneficial	Minimal external storage and storage of materials above ground level on pallets.	negligible
Slowworm, common toad, common frog, smooth newt	WC&A (1981) protected species	Recorded within 2km of the site. Existing habitat near to site	Construction: Slowworm and amphibians feed within terrestrial habitat may potentially include green infrastructure near the construction area. Species may become trapped within trenches and excavations during the construction period. Species may hide under stored materials during the day and be vulnerable to disturbance and injury	Moderate adverse nil beneficial	RAMS including hand removal of waste piles and artificial cover objects (ACOs) storage of materials above ground level on pallets and infilling of trenches, covering and/or provision of escape ramps	negligible
			Operational: Potential for outdoor material storage	Moderate adverse nil beneficial	Minimal external storage and storage of materials above ground level on pallets	negligible

Any development related activities on the site, such as groundworks, clearance or excavations may potentially affect the stated species. As a result, safeguards must be implemented to protect these species and the Method Statement below details measures to be implemented to ensure these objectives are achieved. If these measures are followed, then both objectives will be achieved without the need for a derogation licence from Natural England.

ANY OPERATION THAT RISKS CONTRAVENING CURRENT LEGISLATION SHOULD STOP IMMEDIATELY AND THE GUIDANCE OF A QUALIFIED ECOLOGIST SOUGHT

4.4 Species Summary Table

Affected species	Threat	Action
Bat species	Injury and disturbance, disturbance or destruction of roost habitat	Use of floodlighting prohibited or following agreed procedure with SMBC Ecologist

	Risk low to negligible	
Great Crested Newt	Injury and disturbance Risk low to negligible	Toolbox talks to include species description and ID. Hand clearance of cover objects. Any possible siting to reported to the project ecologist
Badger	Injury or disturbance to badgers Disturbance of setts and foraging patterns Risk low to negligible	Pre-commencement check by ecologist. Reasonable avoidance measures including trench and hole procedures. Materials stored on pallets. Toolbox talk to all operatives. Use of floodlighting prohibited or following agreed procedure with SMBC Ecologist
Nesting Birds	Disturbance of occupied nests	Work outside of nesting season or pre-commencement check within 2 weeks of clearance
Common amphibians and reptiles	Injury and disturbance, disturbance of habitat Risk low to negligible	Pre-commencement check by ecologist. Reasonable avoidance measures including trench and hole procedures. Materials stored on pallets. Toolbox talk to all operatives. Use of floodlighting prohibited or following agreed procedure with SMBC Ecologist
Hedgehog	Injury and disturbance, disturbance of habitat	Pre-commencement check by ecologist. Reasonable avoidance measures including trench and hole procedures. Materials stored on pallets. Toolbox talk to all operatives. Use of floodlighting prohibited or following agreed procedure with SMBC Ecologist

4.5 Construction Exclusion Zones

Areas of the site to be fenced in accordance with a tree protection plan provided in support of the project. This will be conducted prior to work commencing as required within the relevant standards (BS5837 (2012): Trees in Relation to Design, Demolition and Construction to Construction – Recommendations.

4.6 PRE-COMMENCEMENT CHECKS

To ensure no contraventions of current wildlife legislation pre-commencement checks should be completed prior to start of on-site works. These should be completed by a qualified and licenced ecologist at the earliest opportunity. Additional surveying immediately prior to work may be needed where conflict is possible.

BATS:

Buildings: *Pre-commencement check of all buildings to be demolished. This is to specify precautionary working methods, the level of supervision required, timing restrictions (if any) and whether the work requires a mitigation licence from Natural England. The likelihood of roosting bats being present is assessed as low therefore the working method for removing bats is not required unless their presence has been confirmed.*

NO WORK TO COMMENCE UNTIL EITHER BAT ABSENCE WITHIN THE BUILDINGS IS ESTABLISHED OR A WORKING METHOD HAS BEEN AGREED WITH SMBC ECOLOGIST AND NE LICENCE OBTAINED IF REQUIRED

Trees: *Should any works to the Oak trees with potential roosting features (TN5, TN7-10) be required, then an aerial inspection by a licensed bat worker is to be undertaken in advance of any such works being permitted. Depending on the outcome of that survey, further surveys (dusk emergence and dawn re-entry) may be necessary in order to establish the presence/likely-absence of bats, and to characterise any roost(s) present. These trees are all scheduled for retention, and so this risk only arises should pruning or other works be required. As it is not considered realistic to know at the design stage whether or not such works will be required, no further bat surveys of trees are recommended prior to planning determination.*

The retained trees should be protected during works, in line with BS 5837: 2012 Trees in relation to design, demolition and construction. There is to be no loss or major severance (>10m) of tree-lines. The use of artificial lighting is to follow the protocols outlined in the Institute for Lighting Engineers document "Guidance Note 08/18 "Bats and Artificial Lighting in the UK: Bats and the Built Environment Series" (2018)" to minimise disturbance and sky-glow across the site; and onto the boundaries in particular.

BADGER SURVEY: Walkover survey of the site and adjacent land to ensure there are no new setts within 30m of the site and for evidence of badger activity within or close to the development area. Note: *Badgers are mobile animals and will move into new areas, create temporary setts and range widely in search of food. It is important therefore that surveys are conducted immediately prior to work commencing. The results of any badger survey, and recommendations made relating to this to be kept confidential and taken into account during development design and implementation. If evidence of badgers is found, Natural England should be consulted, as badgers and their setts are protected under the Protection of Badgers Act 1992.*

NESTING BIRD SURVEY: All clearance should ideally be completed outside of the recognised nesting period (March-August) to avoid impact upon nesting birds. Any clearance undertaken within the nesting season will require checking for nesting birds by a qualified ecologist prior to commencement of work to ensure no contravention of current legislation occurs. Where occupied nests exist work should not commence until the breeding season (March to September) ends. Note: *The field and trees provide opportunity for a variety of birds to nest. Different birds have different nest site requirements including open grassland, low shrubs, tree canopy, tree holes, eaves, and ground. It is important that all potential nest sites are checked before work commences. Breeding pairs may raise more than one brood per season, therefore fledging of a brood may not necessarily signal the abandonment of a nest.*

HEDGHOG: All clearance of cover objects to be completed by hand where there is potential for sheltering hedgehog to be present. Any hedgehogs found should be removed to a safe location away from the site and where suitable habitat and cover can be found.

AMPHIBIAN AND REPTILE: Great Crested Newts, common toad, smooth newt and Common Toad have been recorded within 2km of the site and it is unlikely that one or more herptile species are present however this cannot be completely discounted. Where understorey, ground cover, tall vegetation, piles of material or log piles are to be moved or cleared they should be checked by a qualified ecologist immediately prior to commencement of work. If Great Crested Newts are found during searches no work is to take place until an agreed method is formulated by a qualified ecologist and the correct mitigation licence obtained. It is advised that should common reptile or amphibian species including Common Toad be found the advice of the ecologist is sought and the animals are relocated to a safe place within the locality. Note: *GCN are afforded full protection under the wildlife and countryside act (1981) (as amended) and the Conservation of Habitats and Species Regulations (2010). This prohibits the intentional killing, injuring or taking (capture etc); possession; intentional disturbance whilst occupying a 'place used for shelter or protection' and destruction of these places. Common Toad, Common lizard, slow worm and grass snake are protected under the wildlife and countryside act (1981) (as amended), it is an offence to intentionally kill, injure or trade these species.*

4.7 ON-SITE METHOD

The following reasonable avoidance methods (RAMS) will be adopted throughout the construction period of the proposed development, this method should be followed for all construction work required during the scheme.

- Establish work area south of the development. The extent of this area to be designated using heras fencing or similar temporary barrier and so creating a construction exclusion zone north of the construction area. No works activity or storage/mixing of materials beyond this point at any time during the construction period.
- All site personnel should be made aware of and adhere to this method statement. A copy of this method statement should be held on site and regular toolbox talks employed to ensure personnel are clear of their responsibilities regarding it. All staff should be able to recognise species subject to this plan.
- Site manager to ensure all pre-commencement checks are complete and fencing erected before work commences
- In order to minimize disturbance ground works should be completed within a minimum time frame.
- Where operations are required to be carried out near to mature trees and other vegetation this should be done where possible by hand and supervised by a suitably qualified ecologist
- In order to reduce impact on bats, badgers, amphibians and hedgehogs all work to be completed during daylight hours. Floodlights and other artificial lighting are not to be used without the prior consent of a suitably qualified ecologist and SMBC.
- All structures, cover objects, piles of materials, trees, shrubs and hedgerows to be removed to be checked for nesting birds and base searched for other protected and priority species (amphibians, hedgehog) by a qualified and licenced ecologist immediately prior to removal. If GCN are found work to stop and SMBC ecologist contacted. Amphibians, hedgehog, reptiles and small mammals where a licence to handle them is not required are to be removed to suitable location away from the work area where shelter and habitat are available.
- Areas of vegetation to be removed are to be strimmed and cut back to approximately 15cm above ground level with hand tools to remove cover at least one week prior to the start of works.
- All working areas within the application site boundary will be hand-searched by an ecologist prior to any form of digging, excavation or final vegetation clearance (below 15cm) works being started.

- Trenches and excavations should have an escape route for animals that enter the trench provided, especially if left open overnight. Ramps should be no greater than 45° in angle. Ideally, any holes should be securely covered.
- All excavations left open overnight or longer should be checked for animals prior to the continuation of works or infilling.
- Back filling should be completed immediately after any excavations, ideally back filling as an ongoing process to the works in hand.
- All materials to be stored off the ground on pallets or other suitable stands to prevent protected and priority species from entering. Visual check for sheltering animals (e.g. hedgehog) under pallets before moving with fork lift
- The grassed areas not to be impacted by works will be maintained (mown and suitable areas strimmed) to discourage amphibians and reptiles being present on site
- If a protected species are found, work must stop immediately and contact should be made with a licensed, qualified ecologist, who will liaise with Natural England.

5.0 CONSTRUCTION METHODOLOGY AND SUMMARY OF SCHEDULE OF WORKS

5.1 Table of Summarized Schedule of Works.

PHASE	ACTION	NOTES
Pre-construction phase	Pre-commencement checks as described in 4.3	If any protected species discovered work not to commence until an agreed strategy is enacted including NE licence if required.
	Establishment of work area, material storage and mixing. Temporary buildings etc. erection of fencing across north boundary of the site	
	Toolbox talk ensuring all personnel are aware of their responsibilities regarding protected species	
	Control of vegetation to create space between material storage areas and boundaries to discourage movement of fauna into the work area and reduce likelihood of fauna sheltering under materials. Maintain short sward and space created	
Construction period	Material deliveries to designated storage areas away from site boundary. Materials stored for minimum time and on JIT system wherever possible.	Any common fauna including hedgehog, toad, frog, smooth newt, slowworm found during activities removed to a safe location away from the work area and where shelter and habitat are available. If any protected species are discovered all work to stop and the project ecologist contacted as per method of working
	Sward around site maintained below 15cm to discourage fauna movement through the site	
Operational period	Storage of materials outside to be minimised and to be raised off the ground e.g., pallets	
	External lighting to be in full compliance with ILP/BCT guidance on artificial lighting and bats	

APPENDIX A: REFERENCES

ENVIRONMENT AGENCY SCIENCE GROUP: AIR, LAND AND WATER (2004). *Assessing the Groundwater Pollution Potential of Cemetery Developments*. Environment Agency, Bristol.

ENVIRONMENT AGENCY SCIENCE GROUP: LANDFILL DIRECTIVE (February 2004). LFTGN02: Guidance on Monitoring of Landfill Leachate, Groundwater and Surface Water. Environment Agency, Bristol.

ENVIRONMENT AGENCY (2006). *Science Report SC020093: Guidance on the design and installation of groundwater quality monitoring points*. Environment Agency, Bristol.

GILBERT, O and ANDERSON, P (1998) *Habitat Creation and Repair*. Oxford University Press, Oxford