

Moorhill Road, West End

784-B029375

Biodiversity Enhancement Management Plan

Highwood Homes

January 2024

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TETRA TECH

Tetra Tech Southampton, The Pavilion, Botleigh Grange Office Campus, Hedge End, Southampton,
United Kingdom, SO30 2AF

Tetra Tech Limited. Registered in England number: 01959704
Registered Office: 3 Sovereign Square, Sovereign Street, Leeds, United Kingdom, LS1 4ER

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EXECUTIVE SUMMARY

Contents	Summary
Site Location	The site is located at Moorhill Road, West End in Hampshire and is centred at Ordnance Survey National Grid Reference SU 47110 13549.
Proposals	The site is the plot of a former residential home and associated garden. The development proposals are for the construction of a 70-bed care home (use class C2) with access to Moorhill Road, parking, landscaping and other associated works.
Scope of this Report	This Biodiversity Enhancement Management Plan (BEMP) will provide details of the implementation of all recommendations outlined in previous reports following surveys conducted by Tetra Tech including: • Ecological Appraisal (EA) (Tetra Tech, 2021a) • Reptile Presence / Likely Absence Survey Report (Tetra Tech, 2021b) • Bat Emergence Survey Report (Tetra Tech, 2022a) • Biodiversity Net Gain Report (Tetra Tech, 2022b); and • Badger Walkover Report (Tetra Tech, 2023) It will also provide details of the management and monitoring of habitats on the site post development to ensure the provision of the BNG assessment report.
Mitigation and Enhancements: Habitats	The development will retain some of the current habitats present in addition to the creation and enhancement of new habitats. The habitats to be created and managed at the site will include: • Other lowland acid grassland – 0.10 ha • Modified grassland – 0.02 ha • Mixed scrub – 0.14 ha • Introduced shrub – 0.08 ha • Rain garden – 0.01 ha • Sustainable urban drainage feature – 0.02 ha • Urban trees – 0.12 ha • Native species hedgerow – 0.16 km • Line of trees – 0.07 km
Mitigation and Enhancements: Species	The site will include a number of enhancement features to support and encourage protected and notable species on site. These will include: • The installation of two hibernacula and two log piles • Two bat boxes to be installed on trees or within the newly constructed building(s) • Two bird boxes to be installed on existing trees on the site boundary

	• The installation of three hedgehog highways within any fencing on site; and • An array of native scrub, tree and grassland planting to create nesting and foraging habitats for a range of species
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1.0 INTRODUCTION

1.1 BACKGROUND

Tetra Tech was commissioned by Highwood Homes to prepare a Biodiversity Enhancement Management Plan (BEMP) for Moorhill Road, West End (hereafter referred to as ‘the site’). It addresses the following items with a view to maintaining and enhancing the biodiversity value of the site in the long-term:

- Management of enhanced and created habitats; and
- Long-term monitoring to determine the effectiveness of management undertaken.

The BEMP is intended to be a working document that will be updated as further information is collected regarding ecology either pre-commencement or during the construction phase. This document will be agreed with the Local Planning Authority (LPA) prior to occupation of the proposed development with any amendments discussed with them throughout the duration of the 30-year monitoring.

Whilst enhancement is not a legal requirement, it has been incorporated into the design as it helps to meet the government objectives for planning to protect and enhance biodiversity, in accordance with the National Planning Policy Framework (NPPF) and meets policy within Eastleigh Borough Councils Local plan under Policy DM11, Nature Conservation. This commitment to delivery of enhancement to the value of the biodiversity of the site is a central facet of the design.

This report has been prepared by Senior Ecologist Lewis Hooper and the conditions pertinent to it are provided in Appendix A.

1.2 SITE DESCRIPTION

The site is located at Moorhill Road, West End in Hampshire and is centred at Ordnance Survey National Grid Reference SU 47110 13549. An Ecological Appraisal (EA) was conducted on the site on 5th May 2021 by Tetra Tech (Tetra Tech, 2021a) and habitats classified in accordance with the categories specified for a Phase 1 Habitat Survey (JNCC, 2010). The habitats found on site consist of dense / scattered scrub, mixed scattered trees, poor semi-improved grassland, tall ruderal, artificial exposures, and waste tips – spoil, amenity grassland, introduced shrub, buildings and hardstanding.

1.3 DEVELOPMENT PROPOSALS

The development proposals are for the construction of a 70-bed care home (use class C2) with access to Moorhill Road, parking, landscaping and other associated works.

1.4 PURPOSE OF REPORT

This BEMP will provide details of the implementation of all recommendations outlined in previous reports following surveys conducted by Tetra Tech including:

- Ecological Appraisal (EA) (Tetra Tech, 2021a);
- Reptile Presence / Likely Absence Survey Report (Tetra Tech, 2021b);
- Bat Emergence Survey Report (Tetra Tech, 2022a);

- Biodiversity Net Gain Report (Tetra Tech, 2022b); and
- Badger Walkover Report (Tetra Tech, 2023).

It will also provide details of the management and monitoring of habitats on the site post development to ensure the provision of the BNG assessment report.

Note that scientific names are provided at the first mention of each species and common names (where appropriate) are then used throughout the rest of the report for ease of reading.

2.0 BASELINE ECOLOGICAL FEATURES

2.1 DESK STUDY

Table 1 provides a summary of the baseline ecological work that was completed to support the planning application.

Table 1. Baseline Ecological work

Survey Type	Month(s) Survey Conducted	Summary of Results
Ecological Appraisal (EA) (Tetra Tech, 2021a)	May 2021	The EA survey was conducted on 5th May 2021 in accordance with the categories specified for a Phase 1 Vegetation and Habitat Survey (JNCC, 2010). The EA recorded the following habitats on site: • Dense Scrub • Mixes Scattered Trees • Poor Semi-Improved Grassland • Tall Ruderal • Artificial Exposures and Waste Tips – Spoil • Amenity Grassland • Introduced Shrub • Buildings; and • Bare Ground The EA recorded habitats that had the potential to support protected species and therefore the following protected species surveys were recommended: • Great Crested Newts <i>Triturus cristatus</i> (GCN) • Reptiles • Roosting bats • Foraging and commuting bats • Badger <i>Meles meles</i> • Hazel Dormice <i>Muscardinus avellanarius</i>; and • Nesting birds.
Reptile Presence / Likely Absence Survey Report (Tetra Tech, 2021b)	September and October 2021	The habitats on site were assessed as having reptile potential, therefore further presence absence surveys were carried out to establish the reptile populations on site. Following surveys, no reptiles were found on site and they are therefore considered to be likely absent from the site.
Bat Emergence Survey Report (Tetra Tech, 2021b)	August 2022	Bat emergence and pre-dawn return surveys of tree TN31 were carried out on 16 th and 31 st August 2022, in accordance with the survey effort to determine bat presence/likely absence for a moderate suitability tree. No bats were recorded roosting

Survey Type	Month(s) Survey Conducted	Summary of Results
		within the features identified within tree TN31 during the two surveys undertaken.
Biodiversity Net Gain Report (Tetra Tech, 2022b)	October 2022	Based on the current Post-Development Plan, the development would result in a net gain of 0.31 habitat units (+15.19 %) and a gain of 1.03 hedgerow units (+322.23 %). The trading rules are also satisfied.
Badger Walkover Report (Tetra Tech, 2023)	October 2023	A site walkover looking for the presence of badgers was undertaken following suitable habitats to support badgers being identified on the EA. No signs of badgers were identified on the site.

3.0 RELEVANT LEGISLATION TO THE SITE

3.1 NESTING BIRDS

All birds, their nests and eggs are protected by the Wildlife and Countryside Act (W&CA) 1981. It is therefore an offence to intentionally:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nests of any wild bird while it is in use or being built;
- Take or destroy the egg of any wild bird; and
- 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.

The presence of breeding birds should be considered a constraint to development if vegetation clearance is carried out during the bird breeding season (usually considered to be March – September inclusive).

3.2 BATS

All British bat species are listed under Schedule 5 of the W&CA 1981 and under Schedule 2 of the Habitat Regulations as European protected species. This makes it an offence to:

- Deliberately capture, injure or kill any bat
- Deliberately disturb bats, where it is likely to:
 - Impair their ability to breed or reproduce, or to rear or nurture their young;
 - Impair their ability to hibernate or migrate; or
 - Significantly affect the local distribution or abundance of bats.
- Intentionally or recklessly damage, destroy or obstruct the access to the place of shelter or protection; and
- Damage or destroy a bat's breeding site or resting place.

Unmitigated removal of linear corridors such as sections of hedgerows and increases in habitats disturbance (through lighting, noise and vibration impacts) during construction and operational phases of a proposed development could indirectly impact bats that use the site to forage and commute.

Furthermore, direct impacts to bats may occur through road traffic mortalities in the operational phase of a proposed development. Such indirect and direct impacts could result in an offence being committed.

3.3 DORMICE

The hazel dormouse is legally protected in the United Kingdom under Schedule 5 of the W&CA 1981 (as amended); this legal protection was strengthened in 2000 by the Countryside and Rights of Way (CROW) Act 2000 in England and Wales. Under Schedule 12 of this Act, it is an offence to intentionally or recklessly damage, destroy or obstruct access to any structure used by hazel dormice for shelter or protection or to disturb an animal whilst occupying such a structure.

Hazel dormice are also afforded full legal protection under European legislation on Schedule 2 of the Habitat Regulations 2017 (as amended), which transposed the European Habitats Directive (92/43/EEC) into UK law, making it a European protected species. In combination, these legislations make it an offence to:

- Intentionally or deliberately kill, injure or capture a hazel dormouse;
- Damage, destroy or obstruct access to any structure or place used for shelter or protection by a hazel dormouse; and
- Deliberately disturb a hazel dormouse while it is occupying a structure or place which it uses for that purpose.

A European Protected Species Licence (EPSL) from Natural England (NE) is required for any development works that would affect dormouse or dormouse habitat (e.g., hedgerows or scrub) where the species is known to be present.

3.4 GREAT CRESTED NEWTS

GCNs are afforded protection under the Conservation of Habitats & Species Regulations in Schedule 2 2017 (as amended) which applies to all of its life stages. Under the Habitats Regulations it is an offence to:

- Deliberately capture, injure or kill GCN;
- Deliberately disturb GCN;
- Deliberately take or destroy the eggs of GCN; or
- Damage or destroy a breeding site or resting place of GCN.

Disturbance is defined as that which is likely:

- To impair the GCNs ability:
 - o to survive, to breed or reproduce, or to rear or nurture their young; or
 - o to hibernate or migrate.
- To affect significantly the local distribution or abundance of GCN.

The GCN is also listed on Schedule 5 of the Wildlife and Countryside Act 1981 (as amended) which makes it an offence to:

- Deliberately, intentionally or recklessly kill, injure or take a GCN;
- Deliberately, intentionally or recklessly take or destroy the eggs;
- Possess or control any live or dead specimen or anything derived from a GCN;
- Deliberately, intentionally or recklessly damage, destroy or obstruct access to any structure or place used for shelter or protection by a GCN; and
- Deliberately, intentionally or recklessly disturb a GCN while it is occupying a structure or place which it uses for that purpose.

The species is also protected by the Protection of Animals Act 1911, which prohibits and acts of cruelty or mistreatment. The GCN is a Section 41 list NERC Act Species of Principal importance and is also listed in the Local Biodiversity Action Plan (LBAP).

4.0 RELEVANT PLANNING POLICY TO THE SITE

4.1 REVISED NATIONAL PLANNING POLICY FRAMEWORK

A revised NPPF was issued on 5th September 2023 (Department for Levelling Up, Housing and Communities, 2023) and currently supplements government Circular 06/2005, Biodiversity and Geological Conservation: Statutory Obligations and their Impact within the Planning System (Office of the Deputy Prime Minister, 2005).

Circular 06/2005 states that the presence of protected species is a material consideration in the planning process. Paragraph 174 of the NPPF also states that:

- a) protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);*
- b) recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;*
- c) maintaining the character of the undeveloped coast, while improving public access to it where appropriate;*
- d) minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures;*
- e) preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and*
- f) remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.*

The conservation and enhancement of biodiversity is also specifically referenced within the NPPF, with paragraph 179 stating:

To protect and enhance biodiversity and geodiversity, plans should:

- a) Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and*
- b) 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.*

And when determining planning applications, local planning authorities should apply the following principles, listed in paragraph 180:

- a) if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;*

- b) development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;*
- c) development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and*
- d) development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.*

4.2 LOCAL PLAN

The Eastleigh Borough Local Plan 2016 -2036 (Eastleigh Borough Council, 2023) under Policy DM11, Nature Conservation states;

The Borough Council will work with statutory and voluntary agencies and developers to:

- i. Protect, conserve and enhance areas subject to international, national and local nature conservation designations;*
- ii. Assist in achieving national, county and local biodiversity targets as set out in Biodiversity Action Plans (BAPs);*
- iii. Protect, conserve and enhance networks of natural habitats and Eastleigh Borough Local Plan 2016-2036 91 Eastleigh Borough Local Plan 2016-2036 features, including the Priority Biodiversity Areas and Priority Biodiversity Links identified in the Eastleigh Borough Biodiversity Action Plan 2012-2022, and watercourses and wetland complexes, woodland trees and hedgerows important to biodiversity and local character; and*
- iv. On new development sites seek enhancement of biodiversity through the protection and connection of existing and provision of new habitats and features compatible with the native biodiversity characteristics of the Borough.*

The Council will work with PUSH, Natural England, the Environment Agency and other wildlife organisations to develop and implement a strategic approach to the protection of European sites from the direct and indirect effects of development including recreational disturbance. Within Eastleigh Borough this will include:

- a. implementing the Solent Recreation Mitigation Strategy and contributions to recreation mitigation for the New Forest or alternative agreed approaches if required;*
- b. preserving the water quality and flows within the Itchen and Hamble;*
- c. protection of the River Itchen SAC including water quality and the southern damselfly from the impacts of nitrogen deposition; and*
- d. contributing to major elements of the PUSH Green Infrastructure Strategy and other strategies for the provision and enhancement of multifunctional green infrastructure including green routes,*

ecological networks and biodiversity enhancements (see policy S10). Development which is likely to adversely affect the integrity of an international or European nature conservation site will not be permitted.

Development which is likely to have a direct or indirect adverse effect on a Site of Special Scientific Interest (SSSI) will not be permitted, unless the Borough Council is satisfied that there are no alternative solutions and the reasons for the development clearly outweigh the harm to the nature conservation value of the site.

Development will not be permitted if it is likely to have a direct or indirect adverse effect on a Site of Importance for Nature Conservation (SINC) or Local Nature Reserve as shown on the policies map (or on a more recent plan provided by the Hampshire Biodiversity Information Centre), unless it can be demonstrated to the satisfaction of the Borough Council that:

- i. the benefits of the development clearly outweigh the adverse effects on the nature conservation value of the site;*
- ii. the adverse impacts are unavoidable;*
- iii. measures are taken to mitigate or, if this is not possible, compensate for the adverse effects, such that 92 Eastleigh Borough Local Plan 2016-2036 June 2018 the development will result in at least no net loss of biodiversity; and*
- iv. buffers free from development are provided to Locally designated sites within or adjacent to developments to alleviate recreational impact and impacts on edge habitats and to maintain dark skies.*

Impacts on priority habitats and protected and priority species will not be permitted unless the applicant can evidence that;

- there has been thorough habitat and species surveys;*
- there is an overall biodiversity gain; and*
- protected species impacts have been avoided or mitigated and their needs taken into consideration within the development design;*
- the great crested newt strategic survey and strategy have been considered in all developments within 500 m of a great crested newt pond;*
- the strategic bat trapping survey has been considered in all developments within the locality of a woodland surveyed or connected habitat networks.*

In determining planning applications, the Borough Council will:

- a. seek opportunities to create or enhance habitats and features of nature conservation interest, having regard to local geodiversity and soils; 45 Eastleigh Borough Council Biodiversity Action Plan 2012-2022 or updated versions*
- b. have regard to the need to protect, and opportunities to enhance the Priority Biodiversity Areas and the Priority Biodiversity Links set out in the Council's Biodiversity Action Plan⁴⁵; and*

- c. for residential developments within 5.6 km of the Solent Special Protection Areas (SPAs), require contributions to the Solent Recreation Mitigation Strategy or site-specific measures to address recreational disturbance as agreed by the Council and Natural England.*

5.0 ROLES AND RESPONSIBILITIES

5.1 CONSTRUCTION ROLES AND RESPONSIBILITIES

The BEMP will be distributed to all relevant personnel involved with the construction phase of the development including Highwood Homes and any contractors who may be working on the site. It will be the responsibility of the main contractor (Highwood Homes) to distribute this document (where relevant) to all other contractors, sub-contractors and visitors to the site as appropriate, who will in turn be bound by the terms therein.

An Ecological Clerk of Works (ECoW) is a competent Ecologist who will be responsible for providing advice to the construction teams during all phases of the scheme on all pertinent ecological issues and checking that the ecological protection and mitigation measures, as specified in this document, are implemented.

The ECoW will have specific responsibilities which will include:

- Delivery of an initial toolbox talk to introduce site staff to this document and describe the protected species that may be encountered on site, and the protection measures required;
- Provision of advice on the location of protected species e.g., dormice and the type and location of protection or mitigation required;
- Supervising and monitoring the implementation and maintenance of protective measures in accordance with legal requirements or the terms set out in this document;
- Liaison with the main contractor's site manager and other relevant stakeholders as appropriate; and
- Monitoring of the created and retained habitats on site.

Specific responsibilities of the client, Highwood Homes, in relation to this BEMP will include:

- Ensuring that this BEMP is distributed to all relevant parties;
- Adhering to the provisions made within this document;
- Complying with the advice of the ECoW; and
- Ensuring that all persons working within the area covered by this BEMP are briefed on relevant aspects. Once the initial toolbox talk has taken place (prior to works commencing on the site), briefing notes will be left on site for future visitors / contractors.

5.2 POST-CONSTRUCTION ROLES AND RESPONSIBILITIES

Post-construction management will be the responsibility of the Highwood Homes or an appointed management agent.

6.0 MITIGATION AND ENHANCEMENT: HABITATS

The development will retain some of the current habitats present in addition to the creation and enhancement of new habitats. The management / creation of habitats at the site will include:

- Other lowland acid grassland – 0.10 ha
- Modified grassland – 0.02 ha
- Mixed scrub – 0.14 ha
- Introduced shrub – 0.08 ha
- Rain garden – 0.01 ha
- Sustainable urban drainage feature – 0.02 ha
- Urban trees – 0.12 ha
- Native species hedgerow – 0.16 km; and
- Line of trees – 0.07 km

These will provide suitable habitat for a wide range of species including dormice, GCN, birds, bats and invertebrates. The locations of these proposed habitats within the site post-construction are shown in Figure 2.

6.1 OTHER LOWLAND ACID GRASSLAND

6.1.1 Creation

Newly created areas of lowland acid grassland will be situated primarily along the southern and eastern boundaries with a few further small patches elsewhere. This grassland will be created using the naturally occurring sandy soils found on site best suited to supporting acid grassland species.

A wildflower meadow mix appropriate to the habitat proposed will be sown (e.g., Emorsgate EM7 – Meadow Mixture for Sandy Soils) to maximise ecological benefits.

To prepare a seed bed first remove weeds using repeated cultivation. Then plough or dig to bury the surface vegetation, harrow or rake to produce a medium tilth, and roll, or tread, to produce a firm surface.

Seeds are best sown in the autumn or spring but can be sown at other times of the year if there is sufficient warmth and moisture. Sandy soils are prone to drought so are often best seeded in the autumn or winter to give sown species a chance to establish and root before the dry summer months arrive. The seeds must be surface sown and can be applied by machine or broadcast by hand. To get an even distribution and avoid running out divide the seeds into two or more parts and sow in overlapping sections. Do not incorporate or cover the seeds, but firm in with a roll, or by treading, to give good soil/seed contact.

6.1.2 Management

Most of the sown meadow species are perennial and are slow to establish. Soon after sowing there will be a flush of annual weeds, arising from the soil seed bank. These weeds will offer shelter to the sown seedlings, are great for bugs, and they will die before the year is out so resist cutting the annual weeds until mid to late summer. Then cut, remove and compost, early August is a good time. This will reveal the young meadow, which can then be kept short by grazing or mowing through to the end of March of the

following year. It is recommended that residual perennial weeds such as docks are dug out in lieu of spot treatment with a selective herbicide and / or pesticides.

6.2 MODIFIED GRASSLAND

Newly created areas of modified grassland which are expected to be hard-wearing will receive good quality amenity grass turves, lain in accordance with good horticultural practices. The grassland will be managed regularly and mown to a short sward height throughout the year.

6.3 MIXED SCRUB

6.3.1 Creation

Planting of native species to create new areas and to enhance existing areas of scrub will increase biodiversity on site providing suitable habitat for a range of species. Native species plant list to include:

- Dogwood *Cornus sanguinea*,
- Hazel *Corylus avellana*,
- Honeysuckle *Lonicera periclymenum*; and
- Elder *Sambucus nigra*.

6.3.2 Management

The colonisation of pernicious weeds and invasive species within the scrub will be prevented through monitoring. This will comprise a spot check on an annual basis every year for thirty years post development. If invasive species continue to be present, additional treatment will be required, and this period of monitoring will need to be extended.

Any proposed new tree and / or shrub planting which fails will be replaced during the next suitable planting season for that species. The assessment of the planting will be undertaken in September annually for thirty years post-construction.

6.4 INTRODUCED SHRUB

6.4.1 Creation

Planting of native and wildlife friendly non-native species is recommended including:

- Currant *Ribes sp.*,
- Barberry *Barberis sp.*,
- Guelder rose,
- English lavender *Lavandula angustifolia*,
- Honeysuckle,
- Heather *Calluna vulgaris*; and
- Ivy *Hedera helix*.

6.4.2 Management

The colonisation of pernicious weeds and invasive species within the shrubs will be prevented through monitoring. This will comprise a spot check on an annual basis every year for thirty years post development. If invasive species continue to be present, additional treatment will be required, and this period of monitoring will need to be extended.

Any proposed new tree and / or shrub planting which fails will be replaced during the next suitable planting season for that species. The assessment of the planting will be undertaken in September annually for thirty years post-construction.

6.5 SUSTAINABLE URBAN DRAINAGE FEATURE

6.5.1 Creation

Seeding around the attenuation pond's surrounding grassland areas will use a species rich mix seed, containing native species of local provenance. The use of this seed mix will be used on the grassland surrounding the SuDS to provide an ecologically valuable habitat.

Tall emergent plants will be planted around the pond margins of all waterbodies. Reeds provide an oxygenating function which maintains water quality as well as benefiting the aquatic ecology. Suitable emergent vegetation plants will include common reed *Phragmites communis*, common club-rush *Schoenoplectus lacustris*, lesser reedmace *Typha angustifolia* and reedmace (commonly referred to as 'bulrush') *Typha latifolia*.

Grass seed used for re-seeding in the pond's draw area will be a mix suitable for the wet condition it is expected to experience, such as river plain/ water meadow grass seed containing native species of local provenance. This seed mix comprises 95 % fine grasses and 5 % wildflower seed. Seed will be sown at the appropriate time of year when the ground temperature will be high enough for germination i.e., between April and October.

Biocide or fertilisers on the embankments or drawdown zone must be avoided.

6.6 MANAGEMENT

Reed management will be required to prevent reedmace dominating the pond whilst vegetation is establishing. Reedmace extending into the pond should be monitored, cut and removed when necessary. Non-native species will not be planted and care will be taken to avoid the accidental introduction of strongly invasive, non-native aquatic plants (especially parrot's feather and Australian swamp stonecrop *Crassula helmsii*).

6.7 URBAN TREES

6.7.1 Creation

A mix of urban street trees suited to neutral to acidic soil types are to be planted across the public open spaces of the development including:

- Field Maple *Acer campestre*,
- Silver birch *Betula pendula*,
- Cherry *Prunus avium*,

- Rowan *Sorbus aucuparia*; and
- Oak *Quercus sp.*

Details for tree planting are to comply with BS8545 (British Standards Institution, 2014). As a guide all trees are to be planted in square pits with base undisturbed unless drainage / compaction problems are known. Plant at a depth where the root flare is clearly visible at the soil surface. Where trees have been supplied with the root flare too deep excess soil or fibrous root growth should be removed before planting. Water-in heavily after planting and mulch surface, ensuring mulch is not in contact with trunk of tree.

6.7.2 Management

Any new tree planting which fails will be replaced during the next suitable planting season for that species.

The trees will be planted with shelter guards this will provide protection from damage caused by wildlife including browsing, bark stripping and / or rubbing. If any of the shelter guards are found to have been damaged or removed these will be replaced. Tree guards will be removed once the trees are established.

6.8 NATIVE SPECIES HEDGEROW

6.8.1 Creation

The native hedgerows will comprise of species from the following list:

- Beech *Fagus sylvatica*,
- Dogwood,
- Hazel; and
- Honeysuckle.

6.8.2 Management

Should new planting fail, it will be replaced during the next suitable planting period for that species. This will be undertaken in the dormant season (November to March inclusive) annually for 30 years post construction.

Cutting of the hedgerows, once established, will take place every two years between November and February (inclusive).

7.0 MITIGATION AND ENHANCEMENTS: SPECIES

7.1 NESTING BIRDS

7.1.1 Protection

The EA (Tetra Tech, 2021a) recorded suitable habitat for nesting birds within the site, which consisted of lines of trees and scrub. Large areas of scrub and trees are to be removed on site to facilitate the development. Any removal of vegetation will be undertaken outside nesting bird season, which runs from March to September inclusive. If this is not possible, then a thorough check for nesting birds will be made prior to site clearance by an experienced ecologist. If any active nests are found, they must remain in situ until all the young have fledged under their own accord and an appropriate buffer zone around the active nest must be established.

7.1.2 Enhancement

To enhance the site for nesting birds, two bird boxes are to be placed on existing trees along the boundaries. These will include a combination of entrance hole bird boxes or open fronted bird box, as seen in Plate 1 and 2. The proposed locations for the installation of bird boxes are shown on the site plan in Figure 2.



Plate 1 – Entrance hole bird box



Plate 2 – Open fronted bird box

When placing nest boxes, the following recommendations need to be considered:

- Boxes for tits, sparrows or starlings should be fixed two to four metres up a tree and open fronted boxes should be fitted from 1-2 m in dense cover;
- Unless there are trees which shade the box during the day, face the box between north and east, thus avoiding strong sunlight and the wettest winds;
- Make sure that the birds have a clear flight path to the nest without any clutter directly in front of the entrance. Tilt the box forward slightly so that any driving rain will hit the roof and bounce clear.

The boundary areas to be enhanced through the planting of mixed scrub, tree lines, lowland acid grassland and sustainable urban drainage features will attract an array of insects and provide nesting opportunities for birds, as well as other protected and notable species.

Overall, there will be an increase in the amount of suitable habitat for breeding and nesting birds.

7.2 BATS

The EA (Tetra Tech, 2021a) established that the site had low suitability to support foraging and commuting bats and identified eleven trees which has potential to support roosting bats. The bat emergence survey report (Tetra Tech, 2022a) outlined that following a climbing survey of the eleven identified trees, one was seen to be of moderate potential or higher and emergence/re-entry surveys were then recommended and undertaken. Two surveys were undertaken and noted a likely absence of roosting.

7.2.1 Enhancement

There were no bat roosts recorded on site but to enhance the site for roosting bats, two bat boxes will be placed on mature trees within the site. Bat boxes recommended include two Schwegler 2FN bat boxes (or similar) or Schwegler 2FE (or similar). The proposed locations for the bat boxes are provided in Figure 2.

For all bat boxes, these locations may change dependant on the practicalities of erecting boxes on trees, but the minimum numbers for the site will not change. When placing bat boxes, the following recommendations should be considered:

- Boxes are to placed at a minimum height of 4 m;
- Boxes oriented between southeast and southwest; and
- Entrances should be free of clutter.

The boundary areas to be enhanced through the planting of mixed scrub, tree lines, lowland acid grassland and sustainable urban drainage features will attract an array of insects providing further foraging habitats for local populations of bats.

7.3 OTHER PROTECTED AND NOTABLE SPECIES

To enhance the site to allow for future colonisation of other protected and notable species, the following enhancements will be incorporated.

- Three hedgehog highways are to be installed into the surrounding boundary fencing. These will be placed, where suitable, along the site boundary to provide full connectivity with the surrounding area. Details regarding the dimensions of these are provided in Appendix B, and the proposed locations of these highways are presented in Figure 2; and
- Two hibernacula and two log piles will be created from cleared vegetation and installed within the boundary planting.

The hibernacula and log piles will be constructed from cleared vegetation to create a similar structure to the example in Plate 4. These will measure approximately 2 m x 1 m x 1 m, with larger material forming the base with progressive layers of lighter material and brash. These will be created in a sheltered location which will receive sunlight, and on a gentle slope to avoid waterlogging.

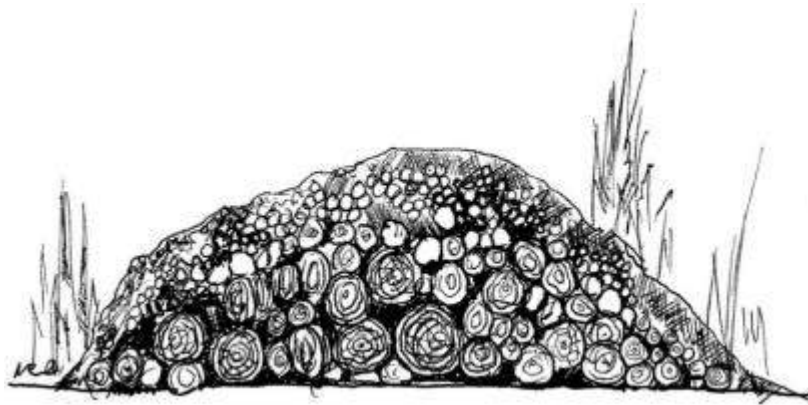


Plate 4 – Example of a natural log pile (ARG UK, 2018)

8.0 TIMING SUMMARY AND RESPONSIBILITIES

A summary of works to be undertaken pre and during-construction are included in Tables 2 and 3.

In the pre and during-construction phase, the developer will be responsible for the implementation of all mitigation and enhancement works. The developer will also be responsible for appointing a suitably experienced ECoW to oversee avoidance and protection of ecological features, and complete site audits to confirm that mitigation and enhancement measures have been implemented.

Table 2. Pre-Construction Works

Task	Recommended Month/Season
Clearance Works	October - February
Erection of bat boxes on trees	Any

Table 3. During-Construction Works

Task	Recommended Month/Season
Creation of log piles	Any (immediately post-vegetation clearance)
Installation of bat boxes on trees	Any (during construction)
Installation of bird boxes on trees	November – February (during construction)
Installation of hedgehog highways	Any (during construction)
Scrub, tree and hedgerow planting and infilling	November - February
Acid grassland seed mixes	April – October

9.0 REFERENCES

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FIGURES

Figure 1 – Site Location Plan

Figure 2 – Post-Development Enhancement Plan



Site Location Plan
Moorhill Road, West End
Highwood Homes Ltd



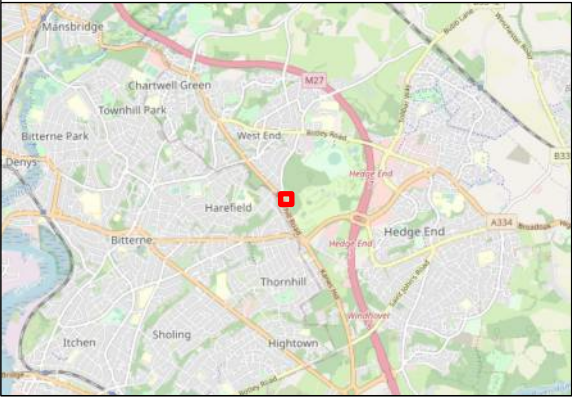
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 Site boundary

Notes:

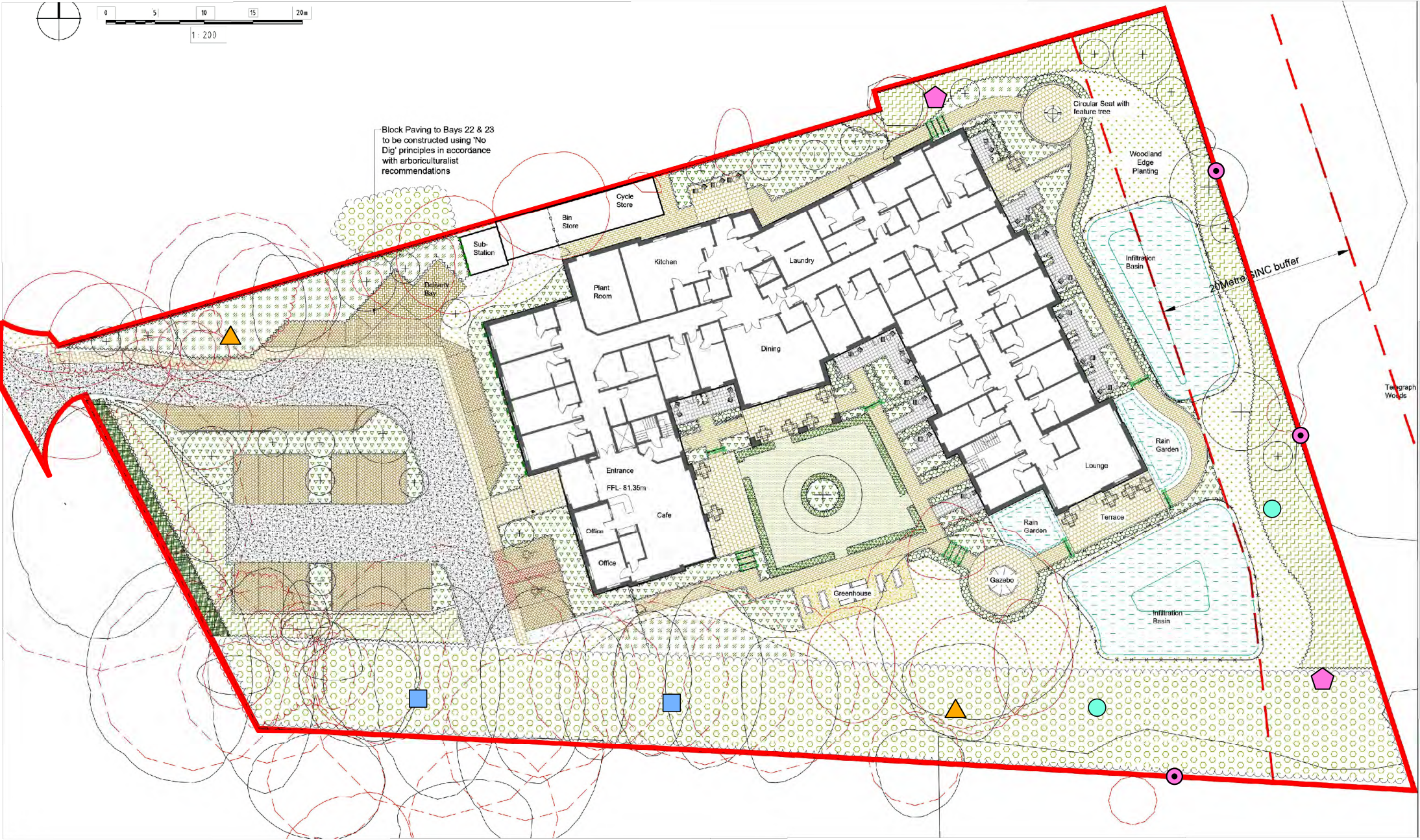
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Checked by: BC	Revision No. B
Office: Southampton	06 October 2022

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Post-Development Enhancement Plan

Moorhill Road, West End

Highwood Homes Ltd

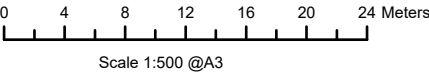
Legend

- Site boundary
- Bat Boxes
- Bird Boxes
- Hibernacula
- Log Piles
- Hedgehog Highway

Notes:

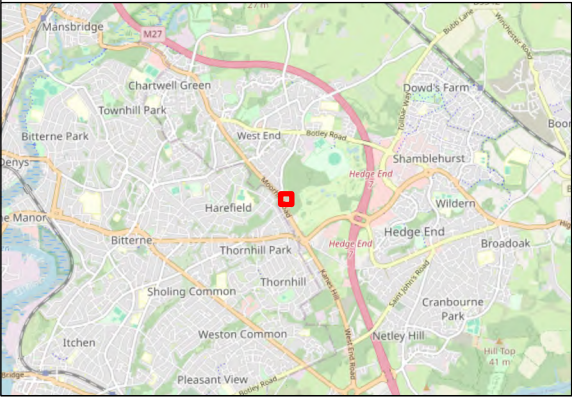
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Checked by: BC
Office: Manchester

Figure No. 2
Revision No. B
13 June 2024



British National Grid
NGR: 447108E 113544N

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APPENDICES

APPENDIX A: REPORT CONDITIONS

This Report has been prepared using reasonable skill and care for the sole benefit of Highwood Homes (“the Client”) for the proposed uses stated in the report by [Tetra Tech Limited] (“Tetra Tech”). Tetra Tech exclude all liability for any other uses and to any other party. The report must not be relied on or reproduced in whole or in part by any other party without the copyright holder’s permission.

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The report refers, within the limitations stated, to the environment of the site in the context of the surrounding area at the time of the inspections'. Environmental conditions can vary and no warranty is given as to the possibility of changes in the environment of the site and surrounding area at differing times. No investigative method can eliminate the possibility of obtaining partially imprecise, incomplete or not fully representative information. Any monitoring or survey work undertaken as part of the commission will have been subject to limitations, including for example timescale, seasonal and weather-related conditions. Actual environmental conditions are typically more complex and variable than the investigative, predictive and modelling approaches indicate in practice, and the output of such approaches cannot be relied upon as a comprehensive or accurate indicator of future conditions. The “shelf life” of the Report will be determined by a number of factors including; its original purpose, the Client’s instructions, passage of time, advances in technology and techniques, changes in legislation etc. and therefore may require future re-assessment.

The whole of the report must be read as other sections of the report may contain information which puts into context the findings in any executive summary.

Tetra Tech reserves the right to share this Report and any related materials, surveys, drawings and/or documents at any time with the relevant Local Ecological Records Centre (LREC), any relevant statutory body or any equivalent organisation as Tetra Tech may reasonably require from time-to-time.

The performance of environmental protection measures and of buildings and other structures in relation to acoustics, vibration, noise mitigation and other environmental issues is influenced to a large extent by the degree to which the relevant environmental considerations are incorporated into the final design and specifications and the quality of workmanship and compliance with the specifications on site during construction. Tetra Tech accept no liability for issues with performance arising from such factors.

APPENDIX B: HEDGEHOG HIGHWAYS

The information in this appendix relates to the hedgehog highway gates to be installed within the fencing erected on-site.

Hedgehog highways are not applicable to post and rail boundaries; however, they are required to all other fenced boundaries. The hedgehog highways are to be positioned in the corner of the screen fence to connect neighbouring gardens. Generally, there should be two per garden, one on each side to provide a route in which the hedgehogs can travel and not get trapped.

Site labourers will be requested to install the highways by cutting a 130 mm x 130 mm square hole in the bottom of the garden fence. The hedgehog highways are to be lined up with the hole and secure into place with screws.

