



Harbour Place

Landscape and Ecological Management Plan



Barratt David Wilson Homes

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Appendix A – Report Conditions



Glossary

CEnv	Chartered Environmentalist
CIEEM	Chartered Institute of Ecology & Environmental Management
ECoW	Ecological Clerk of Works
EMMP	Ecological Mitigation and Management Plan
GCN	Great Crested Newt
GradCIEEM	Graduate
LNR	Local Nature Reserve
MCIEEM	Member of Chartered Institute of Ecology & Environmental Management
NE	Natural England
NERC Act	Natural Environment and Rural Communities Act 2006
NPPF	National Planning Policy Framework
SAC	Special Area of Conservation
SINC	Site of Importance for Nature Conservation
SPA	Special Protection Area
SSSI	Site of Special Scientific Interest
SWBGS	Solent Waders and Brent Goose Strategy



1.0 Introduction

1.1 Background

WYG was commissioned by Barratt David Wilson Homes in January 2019 to prepare a Landscape and Ecological Management Plan (LEMP) for the Approved development at Harbour Place, Bedhampton (hereafter referred to as 'the site'). It details ecological habitat creation and management measures relevant for the site in order to fulfil the requirements of Condition 5 of the Outline consent.

This report has been prepared by Project Ecologist Ben Cooke GradCIEEM and the conditions pertinent to it are provided in Appendix A.

1.2 Site Location

The site covers approximately 22.7 ha, located to the south west of Havant in Hampshire, centred on Ordnance Survey grid reference SU692057.

Directly south of the site is a railway line and beyond this is the A27 and Chichester and Langstone Harbour, a Ramsar Site, Special Protection Area (SPA) and Site of Special Scientific Interest (SSSI). A component of the Solent and Isle of Wight Lagoons Special Area of Conservation (SAC) lies 280m south of the site and the Solent Maritime SAC lies 180m south of the site. South west of the site lies Farlington Marshes, a Local Nature Reserve (LNR). Directly west of the site lies the residential area of Farlington along with East Lodge Farm.

To the north of the site lies the A2030 Havant Road beyond which lie further residential areas along with arable fields. North east of the site is a major junction of the A3 with the A3 slip road extending south along the eastern boundary of the site. The western extent of the site has been designated as a Site of Importance for Nature Conservation (SINC), known as Forty Acres Farm B, due to the presence of dark-bellied brent geese *Branta bernicla bernicla*.

1.3 Context of the Management Plan

This document has been informed by the previous ecology surveys completed on site (see Section 2.1) and the detailed Landscape Proposals prepared by Covey Design (ref: 17745B Sheets 1 – 9).

It sets out range of proposed landscape mitigation, biodiversity planting and amenity planting, objectives and post construction aftercare to safeguard specific landscape features, habitats and species.



2.0 Ecological Baseline

This section summarises the ecological conditions recorded on site prior to development.

2.1 Previous Surveys

The details of this EMMP have been prepared following the completion of the below ecological reports:

- Land at Forty Acre Farm, Havant Road, Havant Bat Activity and Emergence Survey Report (WYG, 2018a).
- Land at Forty Acre Farm, Havant Road, Havant Extended Phase 1 Habitat Survey (WYG, 2018b).
- Land at Forty Acre Farm, Havant Road, Havant Reptile Presence / Likely Absence Report (WYG, 2018c).
- Land at Forty Acre Farm, Havant Road, Havant, Wintering Bird Survey Report (WYG, 2018d); and
- Land at Forty Acre Farm, Havant Road, Havant, Winter Bird Mitigation Strategy (WYG, 2019)

The results where relevant, have been provided below:

2.1.1 Designated Sites for Nature Conservation

There are four statutory designated sites with 2 km of the application site;

- Farlington Marshes LNR / SSSI.
- Chichester and Langstone Harbours SPA / SSSI.
- Solent Maritime SAC; and
- Solent & Isle Of Wight Lagoons.

In addition, there are 30 SINC within 2 km of the site one of which, Forty Acres Farm B (HV0024) is located on site. The SINC is designated for the presence of dark bellied brent geese.

2.1.2 Habitats

The habitats recorded during the Phase 1 habitat survey element of the EA included:

- Arable;
- Bare Ground;
- Broad-leaved semi-natural woodland;
- Buildings;
- Dense scrub;
- Defunct species-poor hedgerow;
- Intact species-poor hedgerow;
- Improved grassland;
- Scattered scrub; and
- Tall ruderal.

2.1.3 Desk Study Information on Protected and Notable Species

The desk study undertaken by WYG in 2016, returned records of protected species within 2 km of the site from Hampshire Biological Information Centre (HBIC) within the last ten years. The records relevant to this EMMP are provided below:

- 29 records of two species of reptiles (common lizard *Zootoca vivipara* and slow worm *Anguis fragilis*);
- 2008 bird records of 147 species;
- Single record of badger *Meles meles*
- 44 records of eight bat species;
- Six records of hazel dormice *Muscardinus avellanarius*;
- 62 records of water vole *Arvicola amphibious*; and
- 203 records of 22 species of invertebrates

2.1.4 Survey Data on Protected and Notable Species

Suitable habitat with potential to support reptiles including unmanaged grassland and scrub were identified along the margins of the site. WYG completed presence / likely absence surveys during June – July 2016 (WYG, 2018c). A peak count of 17 adult slow worms were recorded, indicating the presence of a good population within the site. The population was also found to be breeding as juvenile slow worms were also recorded.

The habitats present within the site offer opportunities for breeding birds to nest including scrub, hedgerow, broad-leaved plantation woodland and buildings.

The presence of broad-leaved plantation woodland and hedgerow provides habitat for foraging and commuting bats. WYG completed activity surveys between May and October 2016 which identified low numbers of four species commuting and foraging within the site: common pipistrelle *Pipistrellus pipistrellus*, soprano pipistrelle *Pipistrellus pygmaeus*, serotine *Eptesicus serotinus* and noctule *Nyctalus noctula* (WYG, 2018a).

Eight buildings are present on site, of these, one (Building 4) was recorded as having suitability to support roosting bats. There were no bats recorded roosting within the building during emergence / return surveys completed by WYG in 2016 (WYG, 2018a). None of the trees on site were identified as having features which would support roosting bats.

Suitable habitats for foraging and commuting badgers were identified within the site in addition to habitat for sett creation. However no signs of badgers were recorded on site during any of the surveys undertaken,

There was no suitable habitat on the site to support great crested newt (GCN) *Triturus cristatus*, hazel dormice, otter *Lutra lutra* and water voles. Therefore the LEMP will not therefore target enhancements for these species.

The site is comprised of two Solent Waders and Brent Goose Strategy (SWBGS) areas; H04B and H04C. Area H04B comprises the western half of the site and is classified as a secondary support area. Area H04C comprises the eastern half of the site and is classified as a low use area. The wintering bird surveys completed by WYG between October 2015 and March 2016 recorded low numbers of brent geese (WYG, 2018d).



3.0 Roles and Responsibilities

3.1 Ecological Responsibilities

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

It will be the responsibility of the Ecological Clerk of Works (ECoW) (to be appointed by Barratt David Wilson) to provide advice to the construction teams during all phases of the scheme on all pertinent ecological issues and to check that the ecological protection and mitigation measures, as specified in this document, are implemented. Recommendations will be passed to Barratt David Wilson who will be responsible for ensuring implementation.

The ECoW will have specific responsibilities which will include:

- Deliver an initial tool box talk to introduce site staff to this document, and detail protected species that may be encountered on site, and the protection measures required;
- Provision of advice on the location of protected species e.g. reptiles and the type and location of protection or mitigation required;
- To supervise and monitor the implementation and maintenance of protective or mitigation measures in accordance with legal requirements or the terms set out in this document;
- Liaison with the main contractor's site manager and others relevant stakeholders as appropriate; and
- Monitoring of the created and retained habitats on site.

Specific responsibilities of the client, Barratt David Wilson, in relation to this EMMP will include:

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

3.2 Landscape Responsibilities

Post construction management of the occupied areas of the site will be the responsibility of the appointed management agent (Land Trust).

The maintenance of trees, shrubs and other plants after the date of practical completion will be carried out by the Landscape Contractor until the responsibility is transferred to the appointed management agent (Land Trust).

Any tree and plant showing the following attributes must be replaced within a period of 5 years from the date of completion unless stated elsewhere within this document. These include those plants that:



- Dead, diseased or dying;
- Are missing or not in accordance with the specification; or
- Lack any vigour.

Replacements must be carried out immediately, or in the next planting season, by the Landscape Contractor.

Any additional topsoil applied to the planting should be quality loam to BS 3882.

Inspection checks shall be carried out by a competent person, either a current member of BALI or the Landscape Institute, acting for the Local Planning Authority and/or appointed management agent (Land Trust), at minimum monthly intervals and as appropriate work is carried out. Six-monthly to annual checks may also be carried out by the Local Planning Authority Biodiversity Officer.



4.0 Objectives

The LEMP will provide a programme of landscape and ecological management, enhancements and future monitoring. This will provide details of the on-going landscape management and maintenance operations for the development which will build confidence in the integrity of the landscape strategy and encourage involvement, activity and community ownership.

The landscape design and ecological mitigation proposals provide a robust environment which is capable of withstanding human activity, phased development and associated construction implications which in time will enhance the setting of the residential development, and provide gains for biodiversity.

The LEMP will make sure that these aims are realised through a programme of regular maintenance that will deliver the following objectives:

- Successful establishment of planting using best horticultural practices to maintain healthy growth;
- Protection, conservation and enhancement of existing trees, vegetation and associated habitats to achieve biodiversity gains and wellness benefits (for example, the benefits of bird song, butterflies and the restorative effects of natural environments to residents and visitors);
- Achieve and maintain a high standard of cleanliness, appearance and repair using sustainable management techniques as far as possible, including avoiding any use of artificial fertilisers.

The LEMP is intended to cover a 30-year period post-construction.

As the establishment of the new planting progresses, management operations may need to be altered to better suit a maturing landscape. However, this document provides minimum standards to be achieved, which is capable of adjustment and fine tuning in order to achieve the stated objectives and standards. No changes should be made without the prior consent of the Local Planning Authority.

4.1 Habitats

4.1.1 Trees

Protection

During construction, all existing trees to be retained shall be protected by root protection fencing in accordance with 'British Standards 5837:2012 Trees in relation to design, demolition and construction – Recommendations'.

Refer to the accompanying Arboricultural report prepared by Barrell Tree Consultancy for full details of which trees are to be retained and protected during construction.

Enhancement

Infill planting of existing hedgerows will take place, in particular along eastern boundary of the site. Species planted will include dogwood *Cornus sanguinea*, hawthorn *Crataegus monogyna*, blackthorn *Prunus spinosa* and spindle *Euronymus europaeus*.



Monitoring and management

Trees will require periodic management and should be undertaken by an Arboricultural Association Approved Contractor to British Standard 3998 Tree Work specifications.

There is an extant Tree Preservation Order (TPO) which relates to retained tree lines within the site (see Appendix B). This order protects specific trees, groups of trees or woodlands in the interests of amenity. Any works to trees within close proximity to this area (not already forming part of any planning consent) will need ensure there i

s no impact to these trees.

Any works that may affect these trees will need to obtain prior approval from the relevant local authority arboricultural team.

All tree surgery works to be carried out between October and February. No works should be carried out between the start of March and end of September to avoid the bird nesting season.

Trees planted within amenity grass areas to have a weed free circle of 1.2 metre diameter maintained for the first three years.

4.1.2 Hedgerows

Protection

During construction, all existing hedgerows to be retained shall be protected by root protection fencing in accordance with 'British Standards 5837:2012 Trees in relation to design, demolition and construction – Recommendations'.

Refer to the accompanying Arboricultural report prepared by Barrell Tree Consultancy for full details of which hedgerows are to be retained and protected during construction.

Enhancement

Infill planting of existing hedgerows will take place, in particular along the western boundary of the site, and new hedgerow planting along the northern boundary, within the open space to the south and encircling the winter bird mitigation area. Species planted will include hawthorn *Crataegus monogyna*, rowan *Sorbus acuparia*, oak *Quercus robur*, guelder rose *Viburnum opulus* and elder *Sambucus nigra*. This will improve green links and provide corridors for wildlife to move around the site and seek refuge, and provide nesting and foraging habitat.

Monitoring and management

Adopting the management principles for a field hedgerow the maintenance regime will aim to increase flowering, nectar and fruits for wildlife. With the exception of visibility splays, hedges should be trimmed on a three-year rotation not annually. Alternate sides should be cut in the first two years with the top cut within the third season. Trimming should ensure a consistent screen from ground level, and a suitable nesting habitat for birds.

Any failures to new hedgerows should be replaced during the next suitable planting period for that species. This will be undertaken in September annually for five years post construction.



Pruning operations should take place between November and February to avoid harm to nesting birds and plant health during the spring / summer growing period.

4.1.3 Native Scrub / Woodland

Protection

N/A

Enhancement

Patches of native scrub and woodland planting are proposed within the open space to the south of the site. Species planted will include hawthorn, rowan, oak, guelder rose bird cherry *Prunus padus* and elder. These areas will provide habitat heterogeneity within the southern open space and cover and foraging opportunities for a wide range of wildlife.

Monitoring and management

Adopting similar management principles for a field hedgerow the maintenance regime will aim to increase flowering, nectar and fruits for wildlife; maintenance is limited to a yearly trim ensuring a consistent screen from ground level, and a suitable nesting habitat for birds.

Pruning operations should take place between November and February to avoid harm to nesting birds and plant health during the spring / summer growing period.

Deadwood located within these areas will be retained on site and utilised to create log piles wherever possible to encourage invertebrates.

4.1.4 Rough grassland

Protection

N/A

Enhancement

The southern portion of the open space will be seeded using a meadow grass mix suitable for wetlands (EM6). This has been chosen to reflect the periodic inundation within this area which is located within the coastal floodplain. Further areas of wildflower meadow (EM1) will be seeded within elevated areas. This grassland type can form a good habitat for invertebrates, small mammals, birds, amphibians and reptiles (and foraging opportunities for bats), providing nesting sites during spring, food during summer and autumn, and shelter during winter.

Monitoring and management

The grassland will be managed in a traditional manner, without artificial fertiliser, to maintain and enhance its nature conservation interest. This will include an autumn cut after herbs and grasses have seeded. A carefully controlled cut, i.e. using light machinery and cutting the sward to no less than 150 mm, is unlikely to harm reptiles, and should benefit them by maintaining the grassland in an open condition and preventing scrub encroachment. Additionally, cutting a rotational basis i.e. leaving selected areas unmown for an entire season, will assist in providing structural diversity to the sward, and provide suitable basking, foraging and refuge areas for reptiles, as well as enhancing its invertebrate diversity. No more than 50% of the rough grassland area should be cut each year.



Mown paths will be maintained on a more regular basis and will be mowed as regularly as required to retain a neat sward of 40 – 60 mm. To provide a sense of order and legibility to the pedestrian routes a mown strip of at least 1 metre either side of the pathways through the open space areas will be maintained. These areas will be increased if necessary to respond to desire lines not envisaged at the design stage. The extent of this should be adapted seasonally to balance the use of the space with biodiversity protection.

Grass should not be cut during wet weather as the machinery may damage the soil structure. Heavy quantities of cuttings should be removed from site. Small accumulations may be left to encourage thatch to develop.

The use of fertiliser within these areas of retained grassland is to be restricted to avoid an increase in the nitrogen output from the site into the wider area. In addition dog waste bins will also be installed throughout the areas of retained grassland to prevent further nitrogen build up within the site.

Scrub, within grassland habitats will be subject to selective removal, cut to a height no greater than 150 mm, within the months of October to February inclusive. If ground disturbance is required to remove roots, this should take place between March and September. Scrub will be monitored, annually in October, and any scrub over encroaching onto grassland habitats will be cut back in order to maintain a structural diversity within these buffers, which will benefit reptiles and other species.

4.1.5 SuDS / Attenuation Areas

Protection

N/A

Enhancement

As part of the sustainable drainage strategy a series of seven attenuation features will be created within the southern open space, linked by a sequence of swales. Three of these have been designed to permanently hold water (see Appendix B).

SuDS features will be planted with a wetland meadow seed mix (EM6 as per 4.14) to enhance the wetland habitats. The upper banks of the SuDS features, above the designed peak water level, will be seeded with an EM1 wildflower meadow mix. 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.

Monitoring and management

SuDS maintenance will be carried out, including dredging to be undertaken on a cyclic basis, to control the accumulation of silt, to prevent succession and improve water quality. Removal of rubbish will also be undertaken. Management of the pond habitat will occur during the winter, after the amphibian breeding season. Monitoring of the pond by a suitably qualified hydrologist and ecologist will inform the management required for the wetland areas.

Dredged material will be removed from the pond and left to one side for a period of 48 hours so that fauna may return to the water body. A waste management licence may be required to dredge plant material from the pond.

Grassland within SuDS features will be managed as per 4.1.4 Rough Grassland.



4.1.6 Amenity grassland

Protection

N/A

Enhancement

The northern portion of the open space will be seeded using an amenity grass mix which is suitable for the higher foot traffic this area is anticipated to attract. It is likely to be used for as an informal kick about area and also contains the proposed play area. The mix will contain slow growing grasses with a selection of native wild flowers that respond well to regular short mowing.

Monitoring and management

The grassland will be managed more frequently than the rough grassland and cut as required to maintain a sward of 25 – 50 mm. Arisings should be removed from site.

Any slight hollows which appear due to settlement or other causes shall be top dressed, early in the growing season, with fine compost lightly rolled in and the grass allowed to grow through before cutting.

4.1.7 Wintering Bird Refuge

For details of enhancement and management of the Wintering Bird Refuge, see accompanying Mitigation Area Creation, Management and Monitoring Strategy (WYG, 2020).

4.2 Notable and Protected Species

4.2.1 Reptiles

Protection

Given a good population of slow worms have been recorded on the development site, reptile mitigation will need to be implemented at the site to prevent breaching the *Wildlife and Countryside Act 1981* (as amended).

A retained area has been incorporated within the Winter Bird Refuge, and will be protected through the erection of one-way fencing as detailed below where there is potential for connectivity to habitats within the construction area. The will act as a receptor site for reptiles. As such a reptile translocation will be undertaken over a minimum of a 30-day period.

An Ecological Clerk of Works will supervise the installation of the one-way fencing. The fencing will be installed during suitable weather conditions (temperatures above 5 degrees Celsius) between March and October (inclusive).

The fencing will either be specifically made reptile fencing or posts with plastic fencing, as detailed below:

- Fence constructed from polythene or similar impermeable material;
- Supported by wooden posts dug at least 300 mm into the ground and standing at least 600mm above ground;



- The plastic sheet will be dug 150 mm into the ground with a 100 mm horizontal 'lip' turning back away from the working area;
- The plastic will be buried with compacted backfill so that no gaps remain;
- The plastic will be nailed to the fence posts and folded over at the top, away from the working area, and stapled to form an overhang;
- The plastic must contain no holes and, at the meeting of two sheets, the join must be secured with 100 mm waterproof tape;
- The fence must remain in place around the whole development area for the entire duration of the construction phase; and
- The areas where fencing is to be installed will be hand searched for reptiles by an ecologist prior to installation of the fence to ensure that no reptiles are harmed during this operation

The fence will remain in place during the period of the works and will be monitored daily by the site Manager, and repaired if damaged.

Mitigation

The translocation will take place as follows:

- Laying artificial refugia to a density of approximately 100/ha in suitable habitat;
- The 30 day translocation will be completed during the reptile active season, which runs from March to October (inclusive), conducted during suitable weather conditions i.e. when it is dry and in temperatures between 10 and 18°C;
- A judgement on the conclusion of the capture stage of the translocation will be made by the ecologist; this is usually accepted after five consecutive visits to a site without encountering any animals;
- All reptiles caught will be recorded, sexed and aged before being released into the receptor area in order to obtain information on the demographics of the reptile population present;
- Following the conclusion of the capture stage, a supervised destructive search will be carried out focusing on the perimeter of the site where reptiles are most likely to be;
- The fence must remain in place around the working areas for the entire duration of the works phase;
- The areas where fencing is to be installed will be hand searched for reptiles by an ecologist prior to installation of the fence to ensure that no reptiles are harmed during the operation; and
- The integrity of the fence will be regularly checked by site manager.

Following the completion of the capture stage of the translocation, a destructive search will be carried out (supervised by an Ecological Clerk of Works (ECoW)) focusing on the areas where reptiles have been found and which will be impacted by the proposed development works. A targeted destructive search will be undertaken using a medium sized excavator (approximately 8-10 tonnes) with a toothed bucket to carry out a gradual scrape of the top one to two inches (25 - 50mm) of top soil.

The spoil heaps created following the destructive search should also be checked for reptiles and amphibians. The excavated spoil heaps will be stored as directed by the ECoW, in consultation with the developers, in an area identified as unsuitable as reptile habitat.



The fence will remain in place during the period of the works and will be monitored and repaired if damaged. If any reptiles are found within the site during any stage of the works, works must cease and a suitably qualified ecologist must be contacted immediately.

Enhancement

Grassland and scrub planting is proposed as discussed above which will result in an increase in suitable reptile habitat on site.

Five hibernacula will be placed within the open space to the south of the site. The design of the hibernacula will follow that set out in the Great Crested Newt Mitigation Guidelines and will include the use of brick, rubble, logs and loose top soil, with a covering of turf. The hibernacula will be circa 1 m in diameter and circa 0.5 m in height.

Monitoring

Monitoring of the populations within the receptor site is likely to be required in later years to determine the success of the translocation programme and to inform future habitat maintenance of the receptor site. Monitoring will be undertaken in the 2nd and 4th year post translocation.

4.2.2 Breeding Birds

Protection

The majority of the hedgerows and trees will be retained as part of the development. The installation of tree protection fencing in proximity will protect any birds nesting from disturbance during the construction stage of the development.

Mitigation

Where possible, site clearance of any habitats with the potential to support nesting birds (including buildings) within the site will be timed to avoid the bird breeding season (March to September inclusive). If works must take place within this period, a suitably qualified ecologist will check for nesting birds prior to work commencing. Any nests present will be left and a buffer zone of at least 5 m will be placed around the nest (although this will depend on the species present), excluding any works until the young have fledged.

Enhancement

The proposed development will include the installation of thirty bird nesting boxes (a mix of hole and open fronted boxes). These should be installed on trees, fences, external walls of houses and / or garages. These will be situated appropriately to avoid full sunlight where possible, and where they cannot be accessed by predators such as cats.

This will be supplemented by the installation of 10 Manthorpe swift bricks (or comparable design) and 10 sparrow terraces (e.g. Schwegler 1SP). These should be situated as high as possible (ideally more than 5 m from the ground), ensuring that there is unobstructed access for birds entering and leaving. If possible, boxes should be sited under the shelter of eaves or overhanging roofs.



4.2.3 Bats

Protection

The majority of the habitat around the boundaries of the site are to be retained. This will allow for the continued commuting and foraging of bats and maintain connectivity to suitable habitat off-site. In addition the installation of tree protection fencing of all retained trees outside of the proposed construction will prevent damage and unnecessary loss of further trees.

Mitigation

Bat Activity

Infill planting of gaps within the boundary hedgerows, in addition to supplementary planting to bolster the hedgerows utilising native species, will enhance these hedgerow and hence loss of bat commuting / foraging habitat will not be significant.

Lighting

The new development will increase lighting levels across the site. This could have an effect on the behaviour of birds and foraging and commuting bats. Light spill will therefore be kept at a minimum by using low-level and directional lighting where possible. This will achieve levels that do not exceed 1 lux upon open space or boundary habitats.

Enhancement

Thirty bat boxes will be installed within residential units and suitable trees within the proposed development. These will comprise a combination of bat boxes (e.g. Schwegler 1FF) and bat tubes which are built in to walls (e.g. Schwegler 1FR).

Monitoring

Bat boxes proposed are self-cleaning and hence will not require management, however if the boxes have fallen into disrepair, an additional box should be placed in the proximity, with the original (damaged) box remaining *in situ*. Works cannot be undertaken on the bat boxes if they are in use unless completed by a licensed surveyor.

4.2.4 Badgers

Protection

A pre-commencement badger survey will be undertaken within one month prior to development commencing on-site to check that no new badger setts have been created which may be impacted by the works area.

In the event badger setts are present and the proposed development will impact these species, a Natural England development licence will be required, however this is not detailed in this report as this is not envisaged at this stage.

Full protection measures are to be informed following completion of a pre-commencement survey.



Mitigation

As part of the toolbox talk prior to works commencing, best practice methods will be implemented on the site to avoid any impacts to commuting and foraging badgers, these will include:

- Consideration should be given to the placement of any topsoil storage, or piles of materials that may create mounds suitable for sett creation. Any such piles are placed well away from identified badger activity, and are checked on a daily basis by construction staff to ensure that no badger activity has taken place. If mounds are to be in place for a significant period of time, the earth will be temporarily fenced to ensure that badgers cannot access the fresh soil;
- There will be no night working to avoid disturbance to badgers, any works within 30m of a sett will cease at least two hours before sunset. There will be no lighting along the eastern boundary of the site to avoid any light spill where badger activity has previously been recorded;
- If any excavations are left open overnight, an earth ramp will be created or a wooden ramp installed to allow any animals that fall in to escape; and
- Any pipes that need to be left overnight on-site will be capped to avoid animals becoming trapped.

Enhancement

The planting of the proposed open space and retained boundaries with a species rich grass mixture will provide an additional foraging resource for badgers through an increase in the number of invertebrates.



5.0 Maintenance Schedule

Table 1: Timing and frequency of management measures

Activity	Detail	Frequency
General Measures		
Watering	Water areas of grass, scrub and tree planting to make sure of healthy development and survival.	As required during periods of dry weather. Years 1 – 5.
Replacement Planting	All plant deaths should be replaced as soon as practical. Remove dead plants within one week and replace within the next planting season, with originally specified species at a size to match maturity of established planting.	As required. Years 1 – 5.
Debris and Litter	Keep planting beds clear of litter and debris.	Twice monthly from May – October and monthly from November – April. Ongoing.
Soil Aeration	All areas of planting suffering compaction by pedestrian or vehicular movements should be lightly forked over. Prick surface to a depth of 75mm. Reduce soil to crumbs and level off. Do not damage plant roots.	Every two months. Ongoing.
Assessment	All areas to be inspected by a qualified ecologist to ascertain the establishment of the meadow areas and associated habitat enhancements. Make recommendations as necessary to address any health problems or necessary remedial works, in discussion with the LPA.	Once every 5 years. Ongoing.
Trees		



Activity	Detail	Frequency
Establishment	Inspect newly planted trees to check for healthy development, carry out arboricultural works as necessary.	Twice annually (Spring and Autumn). Years 1 – 3.
Assessment	Arrange for all site trees to be inspected by a qualified arboriculturalist, and recommendation report obtained to identify any health problems or necessary arboricultural works.	Every 5 years.
Annual Maintenance	Stakes: replace loose, broken or decayed stakes. Ties: Adjust, re-fix and replace loose or defective ties allowing for growth and to prevent chafing. Where chafing has occurred, reposition or replace ties to prevent further chafing.	Twice annually (Spring and Autumn). Years 1 – 4.
Annual Maintenance year 4 onwards	Remove stakes and ties. Make good stake holes.	Autumn. Year 4.
Management of reptile receptor area: cutting		
Hedgerows		
Pruning	Trim to specified height and profile using suitable mechanical cutters. Three-year rotation with alternate sides cut in the first two years with the top cut within the third season.	Annually (October – February) Ongoing.
Replacement Planting	Inspect hedgerow for gaps and carry replacement planting to maintain healthy stock and appearance.	October – February Every 10 years.
Native Scrub / Woodland		



Activity	Detail	Frequency
Pruning	Trim to prevent encroachment into grassland. Three-year rotation with no more than 1/3 rd of edge cut per year. Arisings to be retained to create habitat piles.	Annually (October – February) Ongoing.
Thinning	Thinning of woody understorey to retain herbaceous species that encourage invertebrate diversity.	Year 1 (January – February) Year 5 (January – February)
Grassland		
Cutting (rough grassland)	50% of grassland cut annually to no greater than 150mm. Remove arisings (Leave the 'hay' to dry and shed seed for 1-7 days then remove from site.	Annually (late September) on 3-year rotation. Ongoing.
Cutting (mown paths)	Mown paths and edges to be maintained at 40-60mm. Arisings to be removed from site.	Every 2 weeks in summer and monthly thereafter. Ongoing.
Cutting (amenity grassland)	Mowing to maintain height of 25 – 50 mm.	As required but a minimum of every 2 weeks in summer and monthly thereafter. Ongoing.
SuDS / Attenuation Features		
Cutting	Cutting needed to provide diverse, scrub free marginal areas. Work on 2/3 year rotation with one bank cut each year.	Annually (late September). Ongoing.
Blanket weed and duckweed removal (if established)	Remove with hand tools avoiding damage to other vegetation.	Annually (October – November). Ongoing.



6.0 References

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Appendix A – Report Conditions

This Report has been prepared using reasonable skill and care for the sole benefit of [Barratt David Wilson Homes] ("the Client") for the proposed uses stated in the report by [WYG Environment Planning Transport Limited] ("WYG"). WYG 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.

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. WYG accept no liability for issues with performance arising from such factors.



Appendix B Landscape Masterplan



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|--|---|--|-----------------------------------|
| | Existing trees/hedges to be reviewed | | Acoustic fencing |
| | Existing trees/hedges to be retained | | Post and rail fencing |
| | Proposed trees | | Proposed scrapes |
| | Proposed trees with root barrier | | Compounds location |
| | Specimen shrubs | | Vehicular maintenance gate |
| | Ornamental shrubs with bark mulch | | Mown grass path |
| | Hedge | | EM6 Meadow grass mix for wetlands |
| | Climbers | | Grass mixture with clover EG27 |
| | Premium grade turf | | Decorative gravel |
| | Amenity grass | | Root protection barrier |
| | Wildflower EM1 Basic general purpose meadow mix | | 2m grasscrete access route |

Revision			
A	Scheme adjusted to new layout	PC	20.02.20
B	The key updated	PC	25.02.20



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