



**LIDL, MANOR ROAD, HAYLING
ISLAND, HAMPSHIRE:**

**ECOLOGICAL MITIGATION AND
ENHANCEMENT STRATEGY**

February 2018

Our Ref: ECO00089_872a

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1 INTRODUCTION

Background

- 1.1 Full planning permission, for the development of a new Lidl food store, along with associated hard and soft landscaping was granted (reference APP/17/00656) for land off Manor Road, Hayling Island, Hampshire. Condition 8 of the planning permission requires that:

“Prior to the commencement of development works, a detailed Ecological Mitigation and Management Plan shall be submitted to and agreed in writing by the Local Planning Authority. This shall include, but not be restricted to: details of habitat management measures; details of measures to avoid harm to protected species, including lighting; details of ecological enhancement measures for the remainder of the application site. All mitigation and enhancement features shall be permanently retained and maintained.”

- 1.2 The Ecology Partnership (TEP) carried out a Preliminary Ecological Appraisal of the site in June 2017. This survey found the site to be of generally, low ecological value, with limited potential to support reptiles within the isolated ruderal vegetation patches on site. The hedgerow along the northern boundary was species-rich, and had the potential to support breeding birds. The woodland immediately adjacent (but outside of) the eastern, southern and western boundaries of the site, has some potential to support commuting and foraging bats.
- 1.3 This report therefore, is based upon the species found to be present during the most recent surveys, and provides details of the ecological enhancement measures to be included within the final scheme, to address the requirements of Condition 8.

The site and setting

- 1.4 The development site comprises a matrix of scrub, grassland and open, bare ground. It is bordered to the north and west by Manor Road (A3023), to the south by an open field, and to the east by residential properties.
- 1.5 The wider environs to the south and west are largely urban, with a mixture of residential and commercial properties, with associated infrastructure, pertaining to the town of Hayling Island. To the north and east, the environs are more rural, comprising a mixture of open arable fields, and mudflats, associated with Chichester and Langstone Harbour Ramsar and SPA and the Solent Maritime SAC.

2 HABITATS

2.1 Habitats of ecological value within the site and the wider assessment zone, were the boundary hedgerows, scattered trees, and deciduous woodland. The hedgerows and scattered trees are being retained within the final development and will be protected during construction with appropriate tree-protection fencing. The following habitats will be maintained and/or enhanced within Phase 2 of the site:

- Hedgerows;
- Scattered trees.

Hedgerows

2.2 The objective for these habitat types is to provide nesting and foraging habitat for birds, invertebrates and bats.

2.3 Currently, pre-development, the site contains a species-rich hedgerow, along the northern boundary of the site. To qualify as a priority habitat a hedgerow must consist predominantly (i.e. 80 % or more cover) or at least one woody UK native species. As such, the boundary hedgerow would classify under S.41 of the NERC Act 2006. Given how species rich it is, it also qualifies as being an 'important hedgerow' under the Hedgerow Regulations 1997.

2.4 Although one small section is to be lost to facilitate access, this will be mitigated for by including new native hedgerow planting around the site boundaries, to ensure continued connectivity for any wildlife which may be utilising it as a corridor.

2.5 The retained hedgerows along the site boundaries (which are in close proximity to the development) will be protected during construction work using appropriate tree protection fencing; as detailed on Drawing 701 contained in Appendix 2 of the approved 'Arboricultural Assessment and Method Statement'. The fencing used will be setup to *BS5837: 2012 – Trees in relation to design, demolition and construction* standard.

Scattered trees

2.6 The objective for this habitat type is to provide foraging and nesting habitat for birds, invertebrates, and bats.

2.7 The retained scattered trees along the site boundaries (which are in close proximity to the development) will be protected during construction work using appropriate tree protection fencing; as detailed on Drawing 701 contained in Appendix 2 of the approved 'Arboricultural Assessment and Method Statement'. The fencing used will be setup to *BS5837: 2012 – Trees in relation to design, demolition and construction* standard.

3 BATS

- 3.1 During the Preliminary Ecological Appraisal in 2017 (TEP 2017), no trees within the site boundary were identified as offering roosting potential, nor were any habitats noted to be of particular importance to commuting/foraging bats.
- 3.2 The areas of deciduous woodland adjacent to (but outside of) the eastern, southern and western site boundaries were recorded as offering suitable habitat for commuting/foraging bats. As this habitat is outside of the boundary, no Phase 2 surveys were undertaken, however, several recommendations have been made in order to ensure that the development does not negatively impact any species using these features.

Habitat Enhancements

- 3.3 As many of the hedgerows/mature tree lines as possible will be retained (in accordance with Drawing 701 contained in Appendix 2 of the approved 'Arboricultural Assessment and Method Statement'. The retention of these trees will ensure that connectivity within and across the site is maintained. New planting will include native trees and hedgerows, as detailed on the Landscape Strategy (PR-011_RevH); such as beech *Fagus sylvatica*, field maple *Acer campestre*, oak *Quercus robur*, hawthorn *Crataegus monogyna* and dogrose *rosa canina*.
- 3.4 No lighting will be installed within or directed toward the deciduous woodland adjacent to the boundaries of the site. Any required lighting along the retained and enhanced green corridors along the site boundary will be minimised with hoods or cowls used to direct light to where it is needed (i.e. onto the footpath/cycleway surfaces) and limit overspill into adjacent habitats.
- 3.5 Areas of species-rich wetland wildflower grassland will be planted across the site (specifically in the area of open space to the west/south). These will be maintained with a tall sward height to encourage flowering and provide foraging habitat for a range of species including invertebrates, which in turn will provide a food source to foraging bats.
- 3.6 A programme of bat boxes will be included within the final development (Figure 1), in order to enhance the site in regard to bats, this will include 2 x Schwegler 2FN Bat box and 1 x Schwegler 1FF Bat Box. These will be attached to retained mature trees, as per Figure 1. The following guidelines will be followed while siting bat boxes:
- Site at least 4 m above the ground. A box 5-6 metres up from the ground will potentially attract more species;
 - The entrance should face SW to SE;

- Do not use paint or preservatives on bat boxes. This may discourage or even kill bats if inappropriate substances are used;
- Do not place close to artificial lighting as this will deter bats from using the boxes;
- To see if the box is being used, check for droppings (similar to mouse droppings) or watch at dusk during the summer for emerging bats;
- Occasionally, a bat box may be used by birds. If a bird nests in the box do not disturb until nesting is over then remove the nest remains; and
- Once discovered, a bat roost is protected by law and must not be disturbed.

3.7 Bat boxes are available from Wildcare (<http://www.wildcareshop.com>) and other suppliers.

4 BIRDS

- 4.1 Currently, the site offers very limited opportunities for breeding/nesting birds (TEP 2017). The hedgerow along the northern boundary offers suitable opportunities, and this is largely to be retained within the development; with only a small section removed to facilitate access to the site.
- 4.2 In order to protect bird nests and comply with the law protecting them, any grassland, tree or hedge removal should take place outside of the breeding bird season, which is generally considered to be from March to August inclusive.
- 4.3 Although all reasonable steps will be taken to ensure the removal of breeding bird habitat will be undertaken outside of the breeding bird season; if this is not possible, prior to removal, such vegetation should first be checked for the presence of nesting birds by an experienced ecologist. If any nests are found, they would have to be left undisturbed until the chicks had fledged (usually around six weeks).

Habitat Enhancements

- 4.4 Many additional trees and shrubs will be planted across the site, along with areas of species-rich grassland (as detailed in Drawing PR-011H), which will provide further suitable habitat for foraging and nesting birds.
- 4.5 The development will also incorporate a range of bird boxes to enhance the nesting opportunities within the development (Figure 1), which will include:
- Schwegler type 1B – This box can be attached to trees, walls and buildings; it contains an oval entrance, making it a good box for redstarts, marsh/blue and coal tits, as well as pied flycatcher and sparrows.
 - Schwegler type 2H – A good box to attach climbing shrubs. This box is also used to encourage nesting inside, typical species include robins.
 - Schwegler type 2GR – Provides a good level of protection from cats and larger birds. It has three entrance holes which enable light into the box, encouraging nest building. Species which may use this box include blue/marsh/coal tits, redstarts, pied flycatcher and sparrows.
- 4.6 All of the boxes will be placed on trees around the site. Each box will be placed as high as possible up the trees to ensure they are safe from predators etc.

5 REPTILES

- 5.1 During the initial survey, the site was found to offer very limited habitat to support reptiles; this was present in the two small ruderal vegetation patches on site. As the areas were small in their extent, the approved mitigation was to move any reptiles that may be present via habitat manipulation (ie – two stage strimming), to encourage reptiles to move out of the development site into the adjacent suitable habitats.

Habitat Enhancements

- 5.2 The landscaping proposed for the development will use native planting to provide high-quality landscaping and to promote nature conservation by attracting local wildlife. The proposed native shrub and grassland planting ties in with the existing vegetation around the site boundaries, enhancing existing hedgerows and strengthening wildlife corridors by filling in gaps to aid wildlife movement and habitat permeability.
- 5.3 Native hedgerow, tree and grassland planting (as per Drawing PR-011H) are all proposed which would provide areas of connectivity and refugia for herpetofauna on the site.
- 5.4 Further enhancements will include the provision of two log piles, which will be built as a densely stacked pile of variable-diameter woody material, approximately 2 m in length, with loose topsoil or wood chippings packed into the larger cavities. The north-facing plateau should be unshaded and clear of over-hanging vegetation.

6 INVERTEBRATES

- 6.1 Enhancements will be included within the final scheme to support local populations of invertebrates, which in turn will provide a food source for bats, reptiles and birds.
- 6.2 The following enhancements have been included within the final scheme:
- A mixture of native tree species will be incorporated within the landscaping scheme. Species will include those known to support a wide range of invertebrate species such as oak *Quercus Robur*.

7 LONG-TERM MANAGEMENT

Landscaping element	Management Objective	Prescriptions	Detailed creation and management actions
1: Trees	To provide nesting and foraging habitat for a range of invertebrates and birds.	Planting and maintaining trees	- Prepare the soil; this will include levelling the soil and ensuring that the area is watered prior to planting. - Plant the trees and hedgerows using stakes, spiral guards, and ties, and water them in. - Tree pruning shall be carried out as necessary to establish a well-balanced head relative to the natural form and shape of the species and purpose. Maintain a well-balanced crown, shape and character typical of the species, clear of any crossing or rubbing growth allowing a clear stem, 2m above ground level (retain if field tree feathered to ground). - Tree support systems, ties and protective guards shall be checked regularly during establishment and adjusted where necessary. Any broken or missing items shall be replaced and ties adjusted to allow growth and prevent rubbing of bark. - Under take Pest and Disease Control using suitable pesticides or fungicides as advised, only if severe infestation occurs. - Maintain a weed free area at the base of all trees, 1 m diameter mulch area for trees in grass or planting.
2: Hedgerow	To provide nesting and foraging habitat for a range of invertebrates and birds.	Planting and maintaining the hedgerows	- Prepare the soil; this will include levelling the soil and ensuring that the area is watered prior to planting. - Plant the trees and hedgerows using stakes, spiral guards, and ties, and water them in. - Tree pruning shall be carried out as necessary to establish a well-balanced head relative to the natural form and shape of the species and purpose. Maintain a well-balanced crown, shape and character typical of the species, clear of any crossing or rubbing growth allowing a clear stem, 2m above ground level (retain if field tree feathered to ground). - Tree support systems, ties and protective guards shall be checked regularly during establishment and adjusted where necessary. Any broken or missing items shall be replaced and ties adjusted to allow growth and prevent rubbing of bark. - Under take Pest and Disease Control using suitable pesticides or fungicides as advised, only if severe infestation occurs. - Maintain a weed free area at the base of all trees, 1 m diameter mulch area for trees in grass or planting.
3: Wetland wildflower meadow	To provide nesting and foraging habitat for a range of reptiles, invertebrates, bats	- Enhance visual amenity - Provide valuable habitat to invertebrates,	- Cut all fringe areas adjacent to footpaths / hard surfaces fortnightly between April and November, mow to a height of 40 mm. - Cut all other areas in late July – early August following the displacement of any annual seeds. - Leave cut grass in situ for 3-5 days, before removing all arisings off site to approved tip or compost on site. Carry out further cuts until November and again in early spring to maintain

Landscaping element	Management Objective	Prescriptions	Detailed creation and management actions
	and birds.	birds and bats Integrate with surrounding landscape	sward at 3 – 4 cm. Remove all arisings off site or to approved tip or compost on site. - Stop cutting grass in mid-April to allow grass to grow - Cut a neat and consistent finish including edges, without rutting or scalping, ensuring adjacent areas of hard standing free are kept free of arisings. - Hand pull invasive weed species. - Allow leaf litter and fallen woody material to mulch / compost naturally. - Exercise extreme care when working in close proximity to existing/new trees and prevent damage to stems/trunks. - Do not apply organic or inorganic fertilisers - Do not apply insecticides, herbicides or fungicides, as these can destroy valuable wildlife. The exception is herbicides for the control of specific problem weeds (i.e. nettle, spear thistle, creeping thistle, curled dock, broadleaved dock and ragwort) – herbicides for these species should be applied by weed wiper or spot treatment with a back-pack sprayer. - Do not plough, level or re-seed the grassland areas, except with the same species-rich seed mix as used originally.
4: Bat boxes	To provide additional, secure roosting habitat for bats.	- Placement of boxes/bat access panels - Create refuges in suitable locations to increase habitat suitability for bats - Maintenance of bat boxes	- Attach the boxes and/or bat access panels to suitable buildings and trees around the site. - Re-site if not used after two years. - Replace any damaged boxes. - Sometimes, birds may use bat boxes
5: Bird boxes	To provide additional, secure nesting habitat for bird species.	- Placement of boxes - Maintenance of bird boxes	- Cleaning out of nesting debris from bird boxes - Assessment on their usage and whether it would be appropriate to re-site or add further boxes. - Replacement of any damaged boxes.

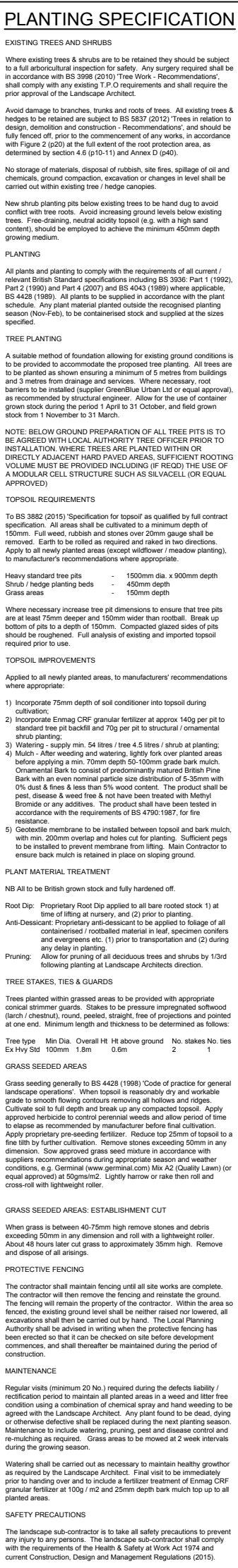
8 REFERENCES

Gunnell, K., Grant, G. and Williams, C. (2012). *Landscape and urban design for bats and biodiversity*. Bat Conservation Trust, London.

Russ JM, Montgomery WI (2002) *Habitat associations of bats in Northern Ireland: implications for conservation*. Biological Conservation 108: 49-5

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FIGURE 1: ECOLOGICAL ENHANCEMENTS

[illegible]

LDFLOWER MANAGEMENT

use fertilizer

2 weeks before sowing. Annual weeds may be hoed, buried or killed with a herbicide. Perennial weeds should be eradicated by a translocated state-based herbicide.

Disturbances either from early March to early May, or from early August to mid-bur, cultivate the ground to provide a fine, weed free seed bed, firm if necessary. Sow evenly at 4gms / m², thoroughly mix one part seed with four dry sand to easily distribute.

Sow in lightly with spring-tined rake and firm soil by treading or, preferably, Water with a fine spray and keep well watered and free from unwanted weeds.

Sward evenly six-eight weeks during the first year after sowing and remove sticks, in the following years cut in early before growth gets starts and in once wild flowers have been shed - remove all cuttings.

To be read in conjunction with the following:

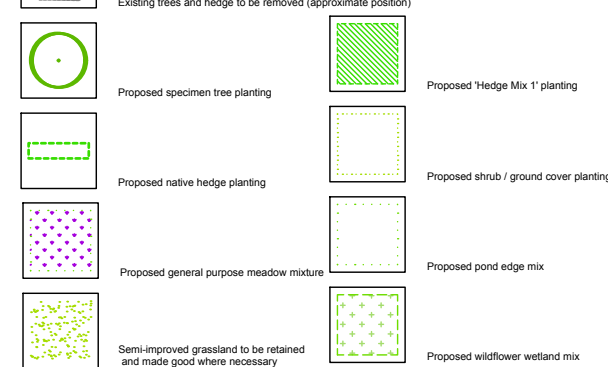
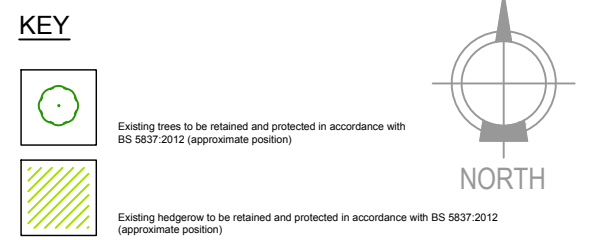
Preliminary Ecological Appraisal (October 2016, The Ecology Partnership)

AAJ5079 / PR-012 - Typical Tree Pit Details (RPS Group plc)

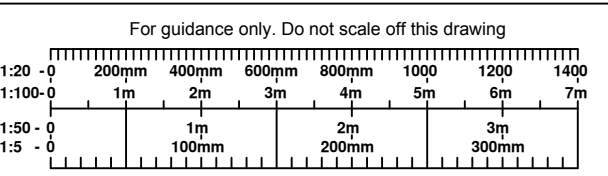
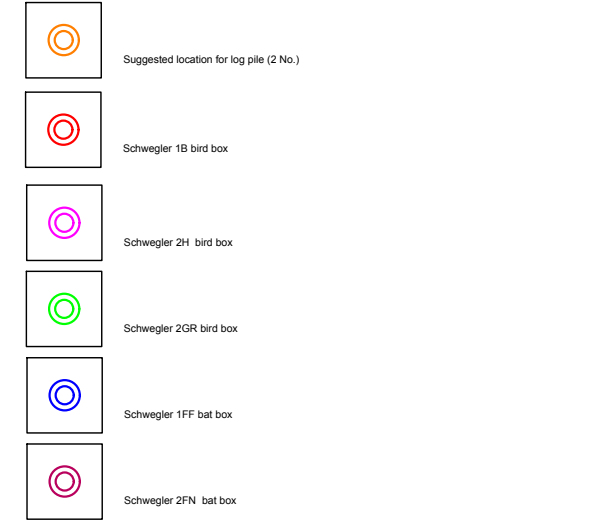
AAJ5079 - Landscape Management and Maintenance plan (RPS Group plc)

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ECOLOGICAL ENHANCEMENTS



Project	Proposed New Lidl Store Hayling Island Hampshire
Title	Ecological Enhancements and Mitigation

Status	Drawn By	PM/Checked by
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1		A