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Technical Note: Mitigation Method Statement

Site: Land at Hillside, Neath

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Introduction

Amber Environmental Consultancy Ltd was commissioned by S&J Properties (Wales) Ltd to provide a mitigation method statement for land at Hillside, Neath. The vegetation had been scraped back in March 2023 to enable access for further ecological surveys, rendering the site bare in places and any further surveys redundant. Following discussion with Neath Port Talbot planning ecologists, a mitigation strategy is required to replace follow up surveys that were previously identified in the Preliminary Ecological Appraisal (PEA), undertaken by Acer Ecology in October 2022 and to provide biodiversity net benefit on the site.

See **Figure 1** for a site location plan.

Site description

The land is around 0.59ha in size and according to the PEA consisted of “derelict brownfield site that has been cleared of vegetation except for a plot of broadleaf trees and scrub to the south-west of the site.”

The habitats recorded on site in October 2022 are described in **Figure 2** (Acer Ecology 2022) and are listed as scrub and scattered scrub, semi-improved neutral grassland, tall ruderal vegetation, Japanese Knotweed stands, Montbretia, Rhododendron, hard standing, rubble pile and log pile.

The development proposal is for eight residential dwellings within the site boundary, with access from Hillside as shown in **Figure 3**.

Mitigation method statement

As the site has been cleared, there is no evidence to support further surveys. Therefore, the worst-case scenario must be presumed and mitigation for all species groups employed.

Invasive Non Native Species (INNS)

There are four INNS on site: Japanese Knotweed, Montbretia, Rhododendron and Bamboo. These must be assumed to have spread throughout the site by the clearance, although a large stand of Japanese Knotweed in the south of the site remained untouched as noted by a site visit on 22nd March 2023. Therefore, an appropriate plan to deal with these species throughout

the whole of the site must be drawn up and implemented before works commence. This may include chemical treatment and/or removal of contaminated soil offsite.

Integral bat and bird boxes

Both bat and bird boxes must be incorporated into the fabric of each dwelling.

Bat boxes must be south, south-east or south-west facing and at a height of 4 metres or more. They can often be sited on the gable end or under the eaves if they are high enough. Suitable types of bat brick can be found [here](#) and [here](#).

Bird boxes must be north or east facing and generally at a 2–4m height, although Swift bricks need to be higher at 5m or more. Swift bricks are often utilised by other birds and can replace ordinary nest boxes where space is limited. Suitable integral nest boxes can be found [here](#) and [here](#).

House 1

- One bat brick on each southern elevation at 4m or higher
- One swift brick on the eastern gable at 5m or higher
- One sparrow terrace on the northern elevation at 2–4m

House 2

- One bat brick on each of the three southern elevations at 4m or higher
- One swift brick on the eastern gable of the most easterly house at 5m or higher
- One sparrow terrace on each of the eastern gables of the other two houses at 2–4m

House 3

- One bat brick on each of the four southern elevations at 4m or higher
- One sparrow terrace on the eastern elevation of the two western houses at 2–4m, and one sparrow terrace on the northern elevation of the most easterly house
- One swift brick on the eastern elevations of the two eastern houses at 5m or higher

Tree planting

Although the plans in **Figure 3** show trees, specific planting to bulk up the boundaries, provide a dark flight corridor for bats, and provide shelter, food, and nesting opportunities for a variety of species is required.

The boundaries of the site should be gapped up where existing hedgerows are to remain, and new hedgerows with native wildlife friendly species should be planted around the boundaries as shown on the site layout plan in **Figure 3**.

The hedgerow species must consist of 60% Hawthorn *Crataegus monogyna*, 10% Hazel *Corylus avellana*, 10% Blackthorn *Prunus spinosa*, 10% Holly *Ilex aquifolium* and 10% Guelder Rose *Viburnum opulus*. Plants should be whips or larger. The hedges should be planted in two staggered rows 30cm apart with 4–6 plants per meter. Plant protection may be needed such as spiral or tube guards until the plants are well established. Any plants that fail within the first three years must be replaced on a like for like basis.

A dark flight corridor can be established by excluding lighting from specific areas so that bats can commute through the site and use the bat bricks within the buildings. Less light sensitive species such as Pipistrelles are likely to be present in the area. It is recommended that linear lines such as hedgerows are kept dark to provide these corridors. Other trees (standards or larger) of local provenance and wildlife friendly species such as Rowan *Sorbus Aucuparia*, Cherry *Prunus sp.*, Crab Apple *Malus sylvestris*, Field Maple *Acer campestre*, Alder Buckthorn *Frangula alnus* should be planted around the site to shield this corridor from external lighting

such as streetlamps. A lighting plan should be drawn up which shows the areas of light overspill in order to inform this tree planting.

Other tree planting should be used in conjunction with any Sustainable Drainage Scheme (SuDS) to provide opportunities for invertebrates and birds.

Hibernacula

Hibernacula should be installed around the boundaries of the site to provide shelter for small mammals, reptiles, amphibians, and invertebrates. These should consist of brash and stone piles covered in soil and allowed to grow over at the base of the hedgerow, but not against the trees themselves. A diagram of the construction can be found in **Figure 4**.

Hedgehog highways

Hedgehog highways must be established through the site by allowing either gaps under fences or holes cut in close board fences to allow hedgehogs to travel freely. Information on hedgehog highways can be found [here](#). A gap of 15cm under any fence or a 13cmx 13cm hole should be cut in wooden fences that reach to the ground.

These mitigation measures are shown in **Figure 5**.

Figure 1: Site plan showing location and approximate red line boundary (Google Maps 2023)



Figure 2: Habitats recorded on site during the PEA by Acer Ecology October 2022

Phase 1 Habitat	Habitat UK Habitats	Description
Dense Scrub (A2.1) and Scattered scrub (A2.2)	Heathland and shrub - Mixed scrub (h3)	The whole site is dominated by a mosaic of scrub habitats comprising dense bramble beds and scattered shrubs predominantly made up of pussy willow (<i>Salix caprea</i>). The dense bramble beds comprise mainly of bramble (<i>Rubus fruticosus</i> agg.) however other species included nettle (<i>Urtica dioica</i>), willowherb sp. (<i>Epilobium</i>), hedge bind weed (<i>Calystegia sepium</i>), Pendulous sedge (<i>Carex pendula</i>), St. John's wort (<i>Hypericum maculatum</i>) and broadleaved dock (<i>Rumex obtusifolius</i>) (Photo 1). The scattered scrub was dominated by willow and included other species such as buddleja, Italian alder (<i>Alnus cordata</i>) sapling, silver birch sapling (<i>Betula pendula</i>), Holly (<i>Ilex aquifolium</i>), white willow (<i>Salix alba</i>), sycamore (<i>Acer pseudoplatanus</i>) sapling, Cotoneaster sp. (<i>Cotoneaster</i>), Rowan (<i>Sorbus aucuparia</i>) sapling, cypress sp. (<i>cypressus</i>) sapling, dogwood (<i>Cornus sanguinea</i>) and elm (<i>Ulmus</i> sp.) sapling (Photo 2). The field layer comprised of semi-improved grassland described in detail below.
Semi-Improved Neutral Grassland (B2.2)	Neutral grassland (g3)	The site is dominated by a scrub mosaic with semi-improved grassland in between the areas of dense scrub and within the field layer of the willow scrub. The area of grassland is dominated by Yorkshire fog (<i>Holcus lanatus</i>), creeping bent (<i>Agrostis stolonifera</i>), false oat grass (<i>Arrhenatherum elatius</i>) and cock's foot (<i>Dactylis glomerata</i>). Forbs included frequent black medick (<i>Medicago lupulina</i>), St. John's wort, tutsan (<i>Hypericum androsaemum</i>), honeysuckle (<i>Lonicera periclymenum</i>), hemp (<i>Cannabis sativa</i>), field-horse tail (<i>Equisetum arvense</i>), ribwort plantain (<i>Plantago lanceolata</i>), greater plantain (<i>Plantago major</i>), bramble, meadow

		vetchling (<i>Lathyrus pratensis</i>), common cat's ear (<i>Hypochaeris radicata</i>), red clover (<i>Trifolium pratense</i>), soft rush (<i>Juncus effusus</i>), hard rush (<i>Juncus inflexus</i>), field wood-rush (<i>Luzula campestris</i>), creeping buttercup (<i>Ranunculus repens</i>), meadow buttercup (<i>Ranunculus acris</i>), willowherb sp., wild strawberry (<i>Fragaria vesca</i>), hedge bind weed, dogrose (<i>Rosa canina</i> agg), teasel (<i>Dipsacus fullonum</i>), broadleaved dock, creeping thistle (<i>Cirsium arvense</i>), common spotted orchid (<i>Dactylorhiza fuchsii</i>), polypody sp. (<i>Polypodium</i> sp), pedunculous sedge, wild carrot (<i>Daucus carota</i>), common fleabane (<i>Pulicaria dysenterica</i>), self-heal (<i>Prunella vulgaris</i>), figwort sp. (<i>Scrophularia</i>), bamboo (<i>Bambusoideae</i>), pheasant berry (<i>Leycesteria formosa</i>), hedge woundwort (<i>Stachys sylvatica</i>) and lady's mantle (<i>Alchemilla</i> sp) (Photos 3 and 4). This habitat conforms to Other neutral grassland with medium distinctiveness of the UK Habs.
Tall Ruderal Vegetation (C3.1)	Tall herb (w16)	There is a small area of tall ruderal vegetation to the west of the site which comprises dogwood, willowherb sp., hedgebind weed, giant sedge, St.John's wort and broadleaved dock (Photo 5).
Japanese Knotweed stand ¹⁷	Tall herb (w16)	A large stand of Japanese Knotweed (<i>Fallopia japonica</i>) was located on the southern boundary of the site amongst the willow scrub (Photo 6).
Montbretia ¹⁸	N/A	A small area of Montbretia (<i>Crocsmia</i> sp) was located within the willow scrub within the central regions of the site (Photo 7).
Rhododendron	N/A	A stand of Rhododendron (<i>Rhododendron ponticum</i>) is present to the north-east of the site (Photo 8).
Hard Standing ¹³	Urban - Developed land; sealed surface (u1b)	A small area of hard standing is located at the northern entrance of the site.
Rubble Pile	N/A	Waste material was present in the central areas of the willow scrub, comprising metal material (Photo 9).
Log Pile	N/A	Four substantial log piles are present throughout the site, two within the northern semi-improved grassland and two within the willow scrub to the south of the site (Photo 10).

Figure 3: Proposed plans for the residential development



Figure 4: Construction of hibernacula. Where the site is wet, the underground component should not be used. (Image copyright – Nigel Hand)

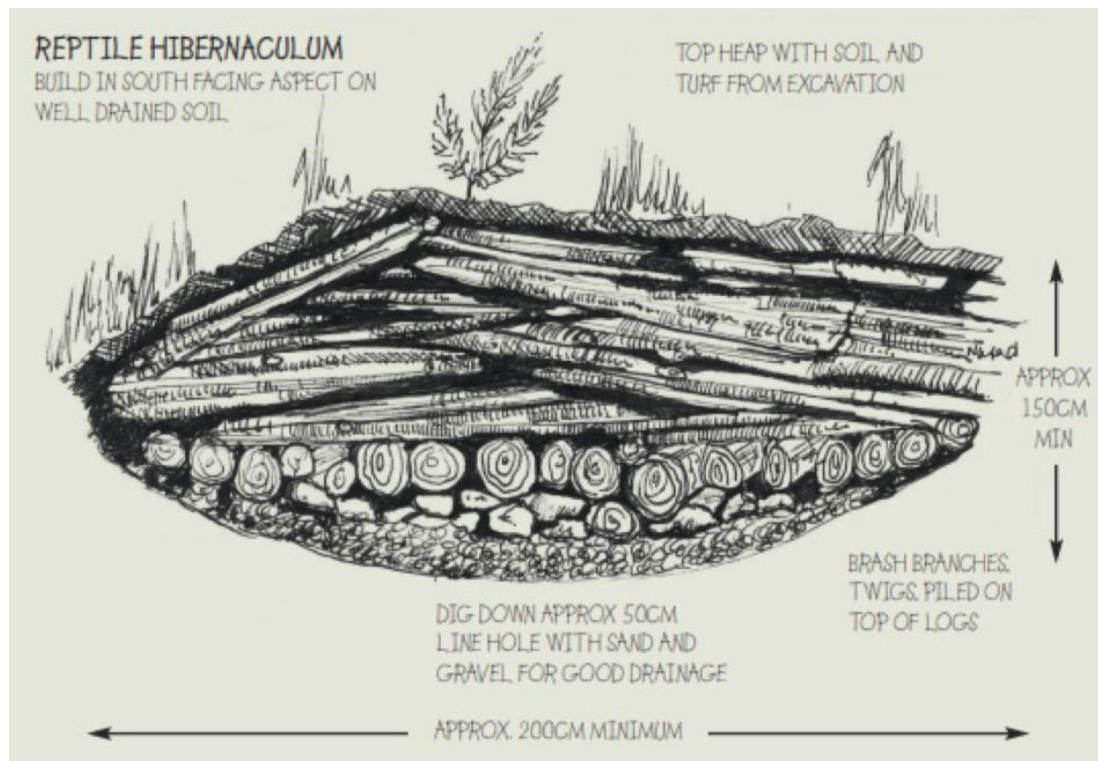


Figure 5: Sketch site plan with mitigation measures shown

