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Creating sustainable futures

Sipson Garden Centre, Sipson, London, UB7 0HW

Biodiversity Net Gain Assessment

Report for Bidwells

Job Number	T10166			
Author	Jordan Whitcombe BSc			
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1.0	Sasha Dodsworth BSc MSc MCIEEM			Final

Temple Group Ltd, The Clove Building, 4 Maguire Street, London SE1 2NQ
T. 020 7394 3700 **E**. enquiries@templegroup.co.uk **W**. www.templegroup.co.uk

Contents

Executive Summary

Temple was commissioned by Adjoin LTD to produce a Biodiversity Net Gain Assessment for the proposed redevelopment at Sipson Garden Centre, Sipson Road, Sipson, West Drayton, London, UB7 0HW ('the Site'). The main findings are as follows:

- The Site does not form part of any statutory or non-statutory nature conservation site and is not located within a preferred location for biodiversity.
- The existing site comprised of a single building with large areas of modified grassland, ruderal habitat, tall forbs, two distinct tree lines, scattered trees and dense scrub. The biodiversity value of the site prior to works was calculated as **9.90** Habitat Units. The linear habitats within the Site had a value of **0.51**.
- The current proposals include the creation of sedum green roof, a sustainable urban drainage system, ornamental shrub, a woodland strip, the conversion of the existing ruderal and modified grassland into other neutral grassland and the planting of new trees. There will also be new hedgerows created with the existing tree lines along the boundaries of the Site. Provided the recommendations outlined in section 5 of this report are followed, the habitats within the proposed development has the potential to achieve a net gain of **3.80** Habitat Units. This equates to a percentage gain of **38.34%** Habitat Units. The linear habitats have the potential to achieve a net gain of **7.02** units**,** equating to a percentage gain of **1387.68%.**
- To achieve the net gains predicted in this report, a Landscape Ecological Management Plan (LEMP) or similar is required to cover the long-term maintenance of newly created on-site habitats. Management recommendations are provided in Section 5 of the report. If habitats are not appropriately managed, then they may not achieve the net gains set out in this report.

1 Introduction

BACKGROUND TO COMMISSION

1.1 Temple was commissioned by Bidwells, to carry out a Biodiversity Net Gain Assessment, providing specialist advice on how the proposed redevelopment of Sipsons Garden Centre, Sipsons Road, Sipson, West Drayton, London, UB7 0HW ('the Site') will impact biodiversity, including identification of opportunities for net gain. A Preliminary Ecological Appraisal (PEA) of the site was carried out in November 2023 by Temple (Temple, 2023a). The results of the PEA survey have been used to inform this Biodiversity Net Gain Assessment.

SITE CONTEXT

1.2 The Site is approximately 7ha in size and is centred on Ordnance Survey National Grid reference TQ 07330 78233. The Site consists of the grounds of the former Sipson Garden Centre, north of the Village of Sipson. It is surrounded by the M4 to the East, an industrial estate to the north, Sipson Road to the west and residential housing to the south. It is approximately 450m south of the town of West Drayton and 1.6km north of Heathrow Airport. The surrounding landscape is a mix of urban and industrial use, with some isolated agricultural fields to the west. There are a number of reservoirs near the Site, including Saxon Lake 1.4km west, Old Slade 3km west and a number of unknown reservoirs 2.3km north-west. Other habitats around the Site include Harmondsworth Moor Park 2.15km west and Cranford Park 2km east.

PROPOSED DEVELOPMENT

1.3 The development proposals for the Site, based on current plans provided by the client is to convert the existing disused Sipson Garden Centre and surrounding land into a new 'Centre of Excellence for Airside Support Vehicles'. This would be a new facility to service a new fleet of electric vehicles used at Heathrow Airport. This would include;

- A service area which includes seven service bats and one racked storage bay (1,003m^2);
- Ancillary office space and other uses of 446.9m^2; and
- Hard standing/parking of approximately 0.57ha.

1.4 The proposals also include landscaping that includes the planting of new trees, hedgerows and installation of green roofs.

SCOPE OF THE REPORT

1.5 This report has been written to assess the potential impact of the proposed development on biodiversity, and whether the proposed plans will meet the target of a net gain in biodiversity. In line with current best practice (Natural England, 2023b), this is specifically in relation to the habitats present and does not involve detailed consideration of any populations or species associated with the habitats at the site. Legislative requirements in respect of protected species must be fully implemented, independent of this Biodiversity Net Gain assessment.

1.6 Although the metric does not explicitly consider the biodiversity value provided by individual species, consideration should be given to locally relevant species interests when creating or enhancing habitats.

1.7 This assessment has been completed in line with the established mitigation hierarchy (as set out in BS42020:2013 and CIEEM, 2019), whereby impacts are first avoided, then mitigated or reduced and, as a last resort, compensated for. Consideration has been made to existing habitats that will be retained and protected as part of the design process, with compensatory habitats proposed where losses are unavoidable. Recommendations for creating new habitats on site to meet the target for biodiversity net gain are provided where required. Net gains are those that are additional to measures required to mitigate for identified impacts.

2 Legislative, Policy and Planning Background

NATIONAL PLANNING POLICY

2.1 The revised National Planning Policy Framework (NPPF) (The Department of Levelling Up, Housing and Communities, 2023) requires local authorities to contribute to and enhance the natural and local environment by minimising impacts on and providing net gains for biodiversity. To protect and enhance biodiversity and geodiversity, plans should 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.

2.2 The Environment Bill was passed into law in November 2021, becoming the Environment Act 2021. The Environment Act 2021 aims to halt the decline of nature by 2030 and mandates biodiversity net gain to ensure developments deliver at least 10% increase in biodiversity in England from 2023. The Act sets out key components of mandatory biodiversity gain including that habitat is secured for at least 30 years via planning obligations or conservation covenants, it is delivered on-site, off-site or via a new statutory biodiversity credits scheme and an introduction of a National register for net gain delivery sites (The Environment Act, 2021).

2.3 The Environmental Targets (Biodiversity) Regulations 2023 were passed into law in January 2023. These Regulations set long-term targets in respect of three matters within the priority area of biodiversity under section 1 of the Environment Act 2021, and in relation to species abundance in accordance with section 3 of the Environment Act 2021. These include: a long-term target to reduce the risk of species extinction by 2042, a long-term target to ensure that at least 500 000ha of a range of wildlife-rich habitat is to be restored or created by 2042, a target that by 2030 the decline in abundance of species is halted, and a long-term target to reverse the decline of species abundance and ensure that abundance is higher by 2042 as

compared to 2022, and at-least 10% higher as compared to 2030 levels. BNG is one of the mechanisms whereby these targets are to be achieved.

2.4 Defra have developed a metric for assessing Biodiversity Net Gain, and published a calculator tool to standardise the approach (Natural England, 2023a). The Act sets out that the minimum 10% gain required is calculated using the Biodiversity Metric and approval of a biodiversity gain plan (The Environment Act, 2021).

2.5 Further information on national planning policy can be found in the accompanying PEA report (Temple, 2023a).

LOCAL PLANNING POLICY

2.6 The London Plan (GLA, 2021) places greater emphasis on green infrastructure and proposes that developments should incorporate green infrastructure. Policy G5 encourages Local Boroughs to develop their own 'Urban Greening Factor[1]' to identify the appropriate target for urban greening, based on the proportion of surface cover that contributes to ecosystem services. In the interim the target score is 0.4 for residential developments and 0.3 for commercial developments. Policy G6 states that 'development proposals should manage impacts on biodiversity and aim to secure net biodiversity gain'. Further information can be found in the PEA report (Temple, 2022a).

2.7 Other planning policies at the local level of relevance to this development include the Hillingdon Local Plan and the Hillingdon Unitary Development Plan. Further information is provided in Appendix 7.

[1] https://www.london.gov.uk/what-we-do/planning/london-plan/new-london-plan/publication-london-plan

3 Methodology

BIODIVERSITY NET GAIN CALCULATION

3.1 The Biodiversity Net Gain Assessment has been based on the Biodiversity Net Gain Good Practice Principals for development (Baker *et. al*., 2019), the Defra Technical Supplement (Natural England, 2023b) and calculated using the Defra Biodiversity Metric 4.0 Calculation Tool (Natural England, 2023a). Using this approach, the value of a site is quantified in Biodiversity Units and calculated based on extent and quality of the habitats present.

3.2 Habitat biodiversity unit scores are influenced by:

- distinctiveness[2] - the rarity and importance of the habitat to biodiversity at a national scale;
- condition[3] - the quality of a habitat at a point in time based on management, disturbance and other environmental factors;
- strategic significance[4] – whether the location of the development and/ or off-site work has been identified locally as significant for nature.

3.3 These factors are attributed numerical scores and multiplied by the extent of the habitat in hectares (ha) to calculate the Biodiversity Unit score for each habitat parcel.

3.4 Linear habitats, including hedgerows and vegetated walls, are assessed separately to those that represent areas. Instead of area measures in hectares these habitats are measured in length (metres). The number of units are calculated in the same

[2] Distinctiveness is automatically determined by the Biodiversity Metric 3.0 Calculation Tool for different habitat types, and allocated an appropriate weighted score.
[3] The condition of the habitats has been calculated based on the condition assessment tables in Defra's Technical Appendix (Defra, 2021b), and allocated a weighted score. Different condition assessment criteria are used for each broad habitat type. For certain habitat types, such as hardstanding and buildings, are allocated a distinctiveness score of 0.
[4] Strategic importance weighted scores are between x and y.

way to habitats areas, multiplying the length by weighted scores for distinctiveness, condition, connectivity and strategic importance.

3.5 Linnear habitats, including hedgerows and vegetated walls, are assessed separately to those that represent areas. Instead of area measures in hectares these habitats are measured in length (metres). The number of units are calculated in the same way to habitats areas, multiplying the length by weighted scores for distinctiveness, condition, connectivity and strategic importance. Biodiversity units for habitats and hedgerows are not equivalent or interchangeable and are assessed separately.

3.6 When calculating Biodiversity Units for proposed habitats, negative multipliers are implemented to account for difficulty factors associated with habitat establishment, temporal delays and off-site risk.

3.7 The information provided in the baseline ecology report for this site (Temple, 2023a) has been used to inform the assessment for habitats present prior to the development, and information provided by the design team and client has been used to inform the assessment of habitats proposed (WHL Landscape, 2023). The Biodiversity Unit value for the site prior to development and the Biodiversity Unit value for the site post-development were then compared to provide an assessment of the change in unit value.

ASSUMPTIONS AND LIMITATIONS

3.8 This assessment is based upon the latest illustrative scheme as a development scenario which could feasibly come forward within the parameters sought for approval (WHL Landscape, 2023).

4 Baseline conditions and on-site compensation

EXISTING SITE – PRE-CLEARANCE

4.1 The proposed development site is not subject to any nature conservation designations. The Site comprises of the former Sipsons Garden Centre and consisted of a mix of grassland, ruderal habitats, dense scrub, scattered trees, hardstanding and three buildings. No Habitats of Principal Importance or London Biodiversity Action Plan (BAP) habitats were present.

4.2 The Site is within 15km of five internationally designated Sites. These are the South-west London Water Bodies Ramsar and Special Protection Area (SPA) 4.9km south-west, Windsor Forest and Great Park Special Area of Conservation (SAC) 10.55km south-west, Richmond Park SAC 12.1km south-east and Burnham Beeches SAC 13km north-west. A Habitats Regulations Assessment has been recommended for South-west London Water Bodies Ramsar and SPA to identify if works are likely to impact this internationally designated Site.

4.3 The Site is not subject to any nationally designated sites. It is within the Impact Risk Zone of three Sites of Special Scientific Interest (SSSI). These are Staines Moor SSSI 4.55km west, Wraysbury Reservoir SSSI 4.75km west and Wraysbury and Hythe End Gravel Pits SSSI.

U1B – Developed land and sealed surfaces

3.1 A large part of the Site contained concrete and tarmac hardstanding. Parts of this hardstanding had encroachment from bramble, elder and ivy. There were also three buildings; a security hut, greenhouse and a barn/shed type building.

3.2 Developed land and sealed surfaces are allocated a fixed condition score of 0 as per the Biodiversity Metric 4.0 Technical Supplement. Therefore, no condition assessment is required.

G4 – Modified grassland

3.3 There were two distinct patches of grassland to the west of the Site. These areas were regularly mown and subject to grazing from rabbits. The species identified within this habitat were dominant cocksfoot, abundant lesser burdock, cow parsley, occasional perennial rye grass, clover, Yorkshire fog, cleavers, meadow buttercup, yarrow with rare common plantain, speedwell sp. common daisy and common dandelion.

3.4 One of these patches contains scattered trees of lawson cypress and holm oak.

3.5 This habitat was assessed as being in moderate condition within the habitat condition forms.

16 – Tall Forbs

3.6 A dense patch of nettle was found in the north-west of the Site. This patch was dominated by nettle with occasional teasel, white nettle, lesser, common dock and rare buddleia.

3.7 This habitat was assessed as being in moderate condition within the habitat condition forms.

81 – Ruderal or Ephemeral

3.8 The majority of the Site consisted of a large patch of ruderal habitat. This was largely unmanaged and was subject to heavy poaching from parked vehicles. Species include abundant lesser burdock, frequent bitter dock, common tansy, cow parsley, occasional creeping buttercup, meadown buttercup, ribwort plantain, wild radish, knapweed, common sowthistle, guensey fleabane, common tansy, common ragwort, ground ivy rare common mugwort, foxglove, hawkweed oxtongue, common mallow, spear thistle, goats rue and an unknown aster species.

3.9 This habitat was assessed as being in moderate condition within the habitat condition forms.

H3D – Bramble scrub

3.10 There were dense patches of scrub in the north-east, south-west and south-east of the Site. These patches were largely unmanaged and contained encroaching English elm, hawthorn, rowan, sycamore and an unknown willow species. This habitat was dominated by bramble with occasional blackthorn.

3.11 Bramble scrub is allocated a fixed condition score of 1 as per the Biodiversity Metric 4.0 Technical Supplement. Therefore, no condition assessment is required.

200 –Trees

3.12 The Site contained two distinct tree lines and two individual lawson cypress trees. One of these trees was dominated by holm oak. The other tree line contained frequent cherry plum with rare cherry, elder, holly, rowan, crab apple and small leaved lime. The ground flora of this habitat was similar to the tall forbs habitat.

3.13 The individual trees and two lines of trees within the Site were assessed as being in moderate condition within the habitat condition forms.

Baseline Calculation

4.4 The biodiversity value of the habitats on site prior to construction (baseline) is shown in Table 4.1 below.

Table 4.1 – Baseline Biodiversity Score

Habitat	Area (ha)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
Urban – Developed land; sealed surface	0.795	V. Low	N/A	Medium	0.00
Heathland and shrub – Bramble scrub	0.308	Medium	N/A	Medium	1.36
Grassland – Modified grassland	0.284	Low	Moderate	Medium	1.25
Sparsely vegetated land – Ruderal/Ephemeral	1.41	Low	Moderate	Medium	6.20
Sparsely Vegetated Land – Tall forbs	0.0733	Medium	Moderate	Medium	0.65
Individual trees – Urban trees	0.102	Low	Moderate	Medium	0.45
				Total	**9.90**

Table 4.2 – Baseline Biodiversity Score (hedgerows)

Habitat	Length (km)	Distinctiveness	Condition	Strategic Significance	Biodiversity Units
33 – Line of trees	0.202	Low	Moderate	Medium	0.51
Total length:	0.202			**Total Biodiversity Units:**	**0.51**

4.5 Accordingly, the biodiversity value of the site prior to clearance, in units, has been calculated as **9.90** Habitat Units**.**

4.6 The Site contained two distinct lines of trees. They have been calculated as **0.51** Habitat Units.

ENSURING BIODIVERSITY NET GAIN THROUGH ON-SITE COMPENSATION

4.7 The Site contained large areas of hardstanding, ruderal/ephemeral habitats, grassland and dense scrub with scattered trees. It is understood that works will involve the demolition of all buildings within the Site as well as the redevelopment of the existing car parks, clearance of a large amount of the dense scrub within the Site and removal of a some boundary trees to the north-east of the Site and the retention of all other trees. A new building will be constructed within this Site (Appendix 2.).

4.8 The current proposals, presented in the plans provided by WHL Landscape (2023) include new areas of sedum or other green roof, creation of two sustainable urban drainage systems, creation of a woodland strip, bulb gardens, ornamental shrub, hedgerows with trees, the planting of new individual trees and conversion of existing ruderal and modified grassland into other neutral grassland.

4.9 Condition is a measure of the biodiversity value of a habitat relative to others of the same type. The other green roofs, bulb gardens, and ornamental shrub were given an automatic condition score of 1.

4.10 The conditions of the newly created hedgerows, trees, sustainable urban drainage systems and woodland strip were assessed as having 'moderate' condition and given a condition score of 2.

4.11 Condition is a measure of the biodiversity value of a habitat relative to others of the same type. The proposed green roofs were judged to have potential to reach a

Moderate condition due to predominantly being planted with natives or species of known value to wildlife.

Post-development Calculation

4.12 A calculation has been provided to determine the biodiversity value for the proposed habitat areas at the Site, as shown in Table 4.2 below. Details of the proposed habitats and recommendations are provided in Section 5.

Table 4.2 – Biodiversity Score Post Development – area habitats

Habitat Created	Area (ha)	Distinctiveness	Condition	Strategic Significance	Time delay (years)	Difficulty	Biodiversity Units
Urban – Other Green Roof	0.0519	Low	Moderate Condition	High	0	Low	0.12
Urban – Developed Land; sealed surfaces	1.04	Very low	N/A	Low	0	Standard Difficulty	0.00
Individual trees – urban trees	0.1588	Medium	Moderate	High	0	Medium	0.58
Grassland – other neutral grassland	1.575	Medium	Moderate	Medium	0	Low	12.02
Woodland – Lowland mixed deciduous woodland	0.1716	High	Moderate	Medium	0	High	0.27
Urban – introduced shrub	0.0083	Low	N/A	Low	0	Low	0.02
Urban – vegetated garden	0.034	Low	N/A	Low	0	Low	0.07
Urban - Sustainable urban drainage system	0.024	Low	Moderate	High	0	Medium	0.07
Heathland and shrub – mixed scrub	0.155	Medium	Moderate	Low	0	Low	1.18

Total	**14.32**

Table 4.3 – Biodiversity Score Post Development – hedgerows

Habitat Created	Length (km)	Distinctiveness	Condition	Strategic Significance	Time delay (years)	Difficulty	Biodiversity Units
Species rich hedgerow with trees	0.78585	High	Moderate	Medium	0	Low	7.53
						Total	**7.53**

4.13 The biodiversity units provided on site by the habitat areas in the current landscaping plans is **14.32** Habitat Units. This calculation is shown in full in the Biodiversity Metric 4.0 Calculation Tool spreadsheet (Temple, 2023b).

4.14 As such the proposed development is predicted to result in a net gain in biodiversity of **3.80** Habitat Units. This equates to a percentage gain of **100%** for Habitat Units.

4.15 The biodiversity units provided on site by the hedgerows in the current landscape plans is **7.53** Habitat Units. This equates to a net gain in biodiversity of **7.02** Habitat Units, or a **1387.68%** percentage gain. This calculation is shown in full in the Biodiversity Metric 4.0 Calculation Tool spreadsheet (Temple, 2023b).

5 Discussion and recommendations

5.1 The below elements should be included within the final landscaping design, and will ensure the proposals result in a measurable biodiversity net gain. Any changes to the final design of the project should also incorporate these measures.

5.2 A Landscape Ecological Management Plan (LEMP) will be drawn up to cover the long-term maintenance of retained and newly created on-site habitats. This should form part of the contractual agreement for the future management of the Site, including the outline measures set out below. This will also ensure the habitats to be created on site will be locally relevant, ecologically functional and will contribute to ecosystem services, where possible.

5.3 Although the enhancement measures for bats, birds and invertebrates do not count towards the biodiversity net gain units for the Site, they are still recommended to enhance the Sites suitability for these protected species and to comply with the relevant policies in the Local Plan.

Wildlife lawns

- It is recommended that the existing grassland is managed in a way to enhance biodiversity. This should include a new cutting regime to create a varied sward height to provide more ecological niches for invertebrates. Fertilizers should be avoided to prevent aggressive species, such as thistles, from dominating this habitat.

Tree planting and creation of hedgerows

- Plant stock should be sourced from a local supplier and ensure it is of local provenance. This will minimise the risk of introducing any diseases and improve plant establishment and growth.

- Hedgerows should be extending in length and cut on a 2-3 year rotation to give a variety of heights and side growth, and to ensure plenty of flowers, berries and fruit. To achieve this, sections of hedgerow could be cut in different years or opposite side cuts in alternative years.

Sustainable urban-drainage system (SuDs) and aquatic habtiats.

- Relative to alternative measures, waterbodies provide high potential value to wildlife and are, therefor, recommended as a mechanism to enhance the importance of the Site for biodiversity. The opportunity to create rainwater gardens, bird baths, reed beds, bioswales, bioretention planters, attenuation ponds or ditches with marginal planting should be explored. These could form part of the SuDs that may be required with the new housing. Any new water feature(s) should be created with naturalistic sinuous and sunken margins, with shallow edges and where possible, linked to an extended swale allowing an overflow during extended wet weather. To help establish vegetation, the pond margins and swale should be planted with marginal plants, using plug plants and a seed mix such as Emorsgate and EP1. Should there be safety concerns about open water, a post and rail fence (providing gaps for amphibians, mammals and birds to access the water) could be installed.

Bird boxes

- It is recommended that bird nesting opportunities are created on the Site post-development. Bird boxes suitable for declining species such as house sparrow (SPI, London BAP and Hackney BAP) should be installed. The inclusion of woodcrete bird boxes (or equivalent) are recommended as they are available in a range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. House sparrow boxes should be located at least 3m in height, out of direct sunlight but not obscured by dense vegetation and adjacent to dense hedgerows and wildflower meadow to maximise foraging opportunities and away from areas of high foot traffic. The boxes should be cleaned out yearly during the winter months (September-February) and old boxes should be replaced or repaired as necessary.

Bat boxes

- Bat boxes should be installed on the Site post-development. Woodcrete boxes are recommended as they include a broad range of designs, are long lasting compared to wooden boxes and insulate occupants from extremes of temperature and condensation. Bat boxes should be positioned between 3-5m above ground level facing south-east to south-west in a location that will not be lit by artificial lighting. The use of integrated bat boxes that can be incorporated into the fabric of the new floors is also recommended as this will create long-term roost resources for local bat populations.

Low impact lighting stratergy

- A Low Impact Lighting Strategy should be implemented in order to minimise the potential of excess light disturbing bats outside the Site boundary and to compliment the bat enhancement measures recommended in this report. This should include;

    - The level of artificial lighting, including floor lighting, should be kept to an absolute minimum;
    - Where this does not conflict with health and safety and/or security requirements, the Site should be kept dark during peak bat activity periods (0 to 1.5 hours after sunset and 1.5 hours before sunrise);
    - Lighting required for security or for safety reasons should use a lamp of no greater than 2000 lumens (150 Watts) and should comprise of sensor-activated lamps;
    - Lights utilising LED technology are the preferred option as these lights do not emit on the UV spectrum, are easily controllable in terms of direction/spill and can be turned on or off instantly;
    - Avoid the use of sodium or metal halide lamps, these gas lamps require a lengthy period in which to turn off and the diffuse nature of the light emitted makes light spillage a significant problem;

- Lights required for night-time deliveries or security patrols could be set to activate with pressure activated sensors set into the ground;
- Lighting should be directed to where it is needed to minimise light spillage. This can be achieved by limiting the height of the lighting columns and by using as steep a downward angle as possible and/or a sheaf/hood/cowl that directs the light below the horizontal place and restricts the lit area;
- Artificial lighting should not directly illuminate any confirmed or potential bat roosting features or habitats of value to commuting/foraging bats. Similarly, any newly planted linear features or compensatory bat roosting features should not be directly lit; and
- Lighting design computer programs can be used to predict the potential impacts of light spillage.

Green roofing

- To demonstrate the highest feasible and viable sustainability standards in line with London Plan Policies (Greater London Authority, 2021) it is recommended that a specification for a biodiverse roof be drawn up by a company with a proven track record in delivering these features in London. Any biodiverse green roof should support at least 25 plant species.

- A biodiverse green roof would provide additional benefits such as protecting and prolonging the life of the roof membrane, reducing building energy use by insulating the building in winter and keeping it cooler in summer, providing a SuDS function by reducing storm water run-off from the roof, reducing the urban heat island effect and local air/noise pollution. Combining a biodiverse roof with PV panels (biosolar roof) would also provide further benefits, such as the cooling effect the vegetation has on the PV cells, increasing their productivity in hot weather, as well as resulting in a more efficient use of roof space.

- The green roof should follow UK standards (GRO, 2014) and include additional habitat features such as deadwood, varying substrate depths and areas of bare

rocky substrate. This will provide good habitat for a range of invertebrates and birds including London and Hackney Biodiversity Action Plan (BAP) species. The London Living Roofs and Walls Technical Report (Greater London Authority, 2008) and the Environment Agency Green Roof Toolkit (2008) should also be consulted on when designing this new green roofing.

Green walls

- It is recommended that green walls or trellis structures are created to provide vertical opportunities for wildlife and maximise greenery. Recommended species include hop, wild honeysuckle, jasmine, and common ivy. These species provide nectar for bumblebees and potential nest sites for different nesting bird species. Honeysuckle is a known plant favoured by the garden tiger moth, a London BAP species. Hop supports buttoned snout moth, a nationally declining species for which London has become a stronghold.

Hedgehog friendly walls and fences

- Any new walls and fencing installed within the Site should be designed to preserve access through the Site. Any new boundaries installed should include holes that are 13cm wide and 13cm tall to allow hedgehogs to pass the barrier.

Stag beetle habitats

- The Site should be enhanced to improve its suitability for stag beetles. This should include the creation of log pile habitats. Designs of this should include half buried wood[5]. Where works require the removal of trees, wood should be kept to create these new habitats.

[5] https://ptes.org/wp-content/uploads/2016/11/Build-a-log-pile-for-stag-beetles.pdf

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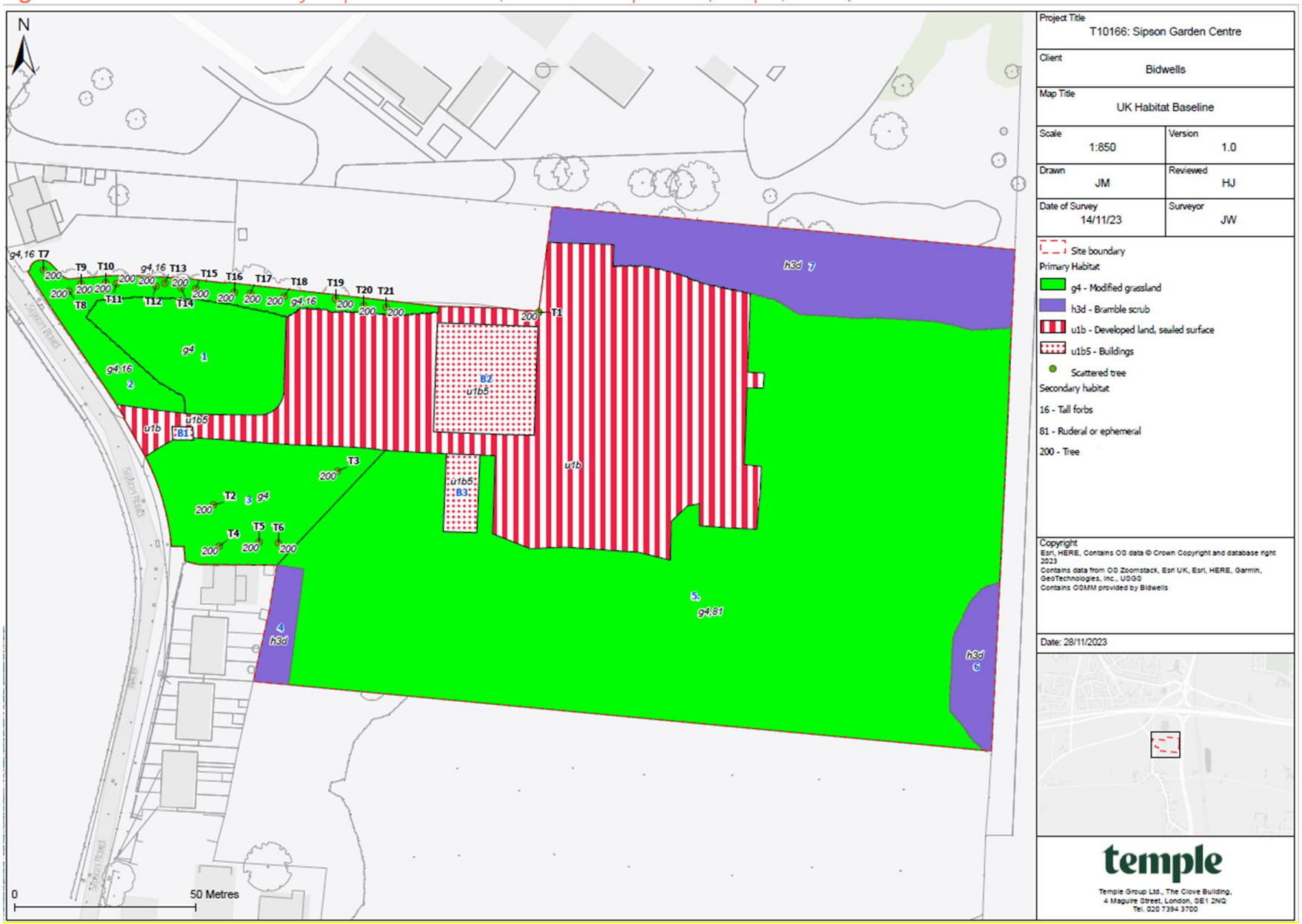
WHL Landscape (2023) Land at the former Sipson Garden Centre, Sipson West Drayton, Hillingdon, London, Devizes, Wiltshire

Appendix 1: Habitat Map

Figure 1: Baseline Habitat Survey Map – Clifton House, 75-77 Worship Street (Temple, 2023a)



Appendix 2: Proposed Landscape Plans

Figure 1: Sketch Site Plan – Heathrow Garden Centre (WHL Landscapes, 2023).

- London: 3rd floor, The Clove Building, 4 Maguire Street, London,SE1 2NQ. T: +44 (0)20 7394 3700
- Haywards Heath: Unit 6 Basepoint; John De Mierre House, 20 Bridge Road, Haywards Heath, RH16 1UA. T: +44 (0)20 7394 3700
- Lewes: 3 Upper Stalls, Ilford, Lewes, East Sussex, BN7 3EJ. T: +44 (0) 1273 813739
- Lichfield: 1-2 Trent Park, Eastern Avenue, Lichfield, Staffordshire, WS13 6RN. T: +44 (0)1543 229049
- Manchester: Express Building, 3 George Leigh Street, Manchester, M4 5AD. T: +44 (0)161 509 4900
- Norwich: 60 Thorpe Road, Norwich, Norfolk, NR1 1RY. T: +44 (0)1603 628408
- Wakefield: The Paine Suite, Nostell Business Park, Doncaster Road, Wakefield, WF4 1AB. T: +44 (0)1924 921900