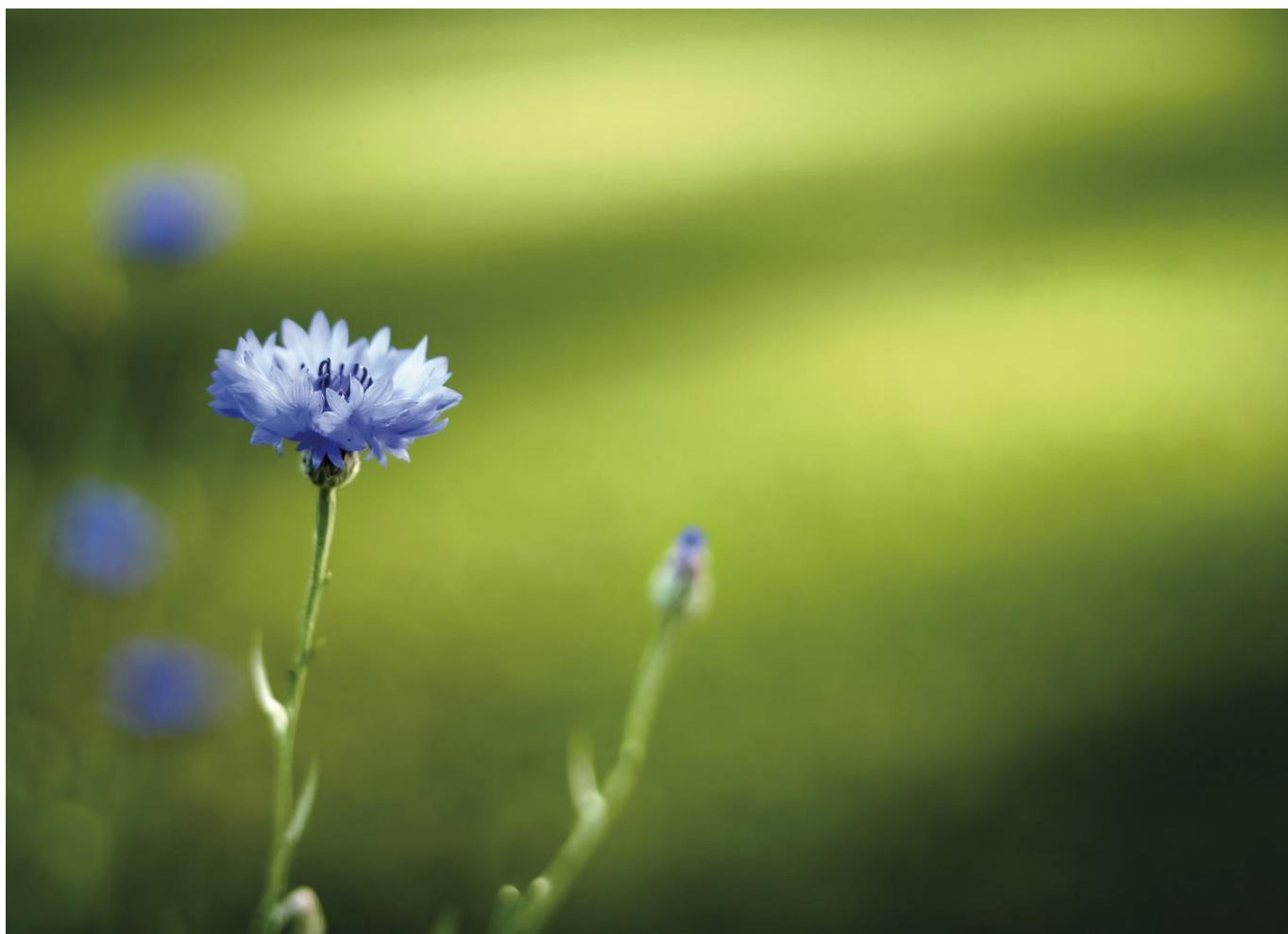




Vinci Construction UK Ltd

Radcliffe Civic Hub

Ecological Management and Maintenance Plan

2482901

JANUARY 2024

RSK GENERAL NOTES

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**Author and
Project Manager**

Amy Harris

**Technical and
Quality /
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reviewer**

Roberta Epps

Signature



Signature



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6 December 2023

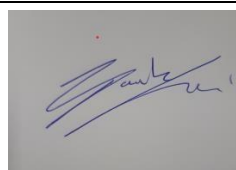
Date:

13 December 2023

**Suitably Qualified
Ecologist**

Mark Lang FCIEEM,
CEcol, CEnv

Signature



Date:

24 January 2024

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Where field investigations have been carried out, these have been restricted to a level of detail required to achieve the stated objectives of the work.

This work has been undertaken in accordance with the quality management system of RSK Biocensus Ltd.

EXECUTIVE SUMMARY

1. This document provides a description of the habitat creation and ecological management proposed for the site referred to as 'Radcliffe Civic Hub'.
2. New habitat is being created at the site which aims to:
 - to enhance the ecological function and overall biodiversity of the site; and,
 - create nesting habitats for local birds; bats and habitats for insects in particular pollinator species.
3. The aims will be achieved through three measurable objectives:
 - A. to create green spaces and increase the flora on the site with fruiting and flowering species to provide a food source for local bird species and pollinators;
 - B. to include bird & bat boxes within the development to increase nesting habitats for birds and roosting habitats for bats;
 - C. to create and maintain green roofs and ensure their initial establishment and continued health.
4. Long-term management will help achieve the aims and objectives for maintaining and enhancing ecological function and biodiversity gain on the site.
5. This document is an ecology management and maintenance plan (EMMP) for the habitat described above. It includes a five year works schedule and the personnel responsible for each task are outlined in *Appendices 1* and *2* to ensure the aims and objectives are maintained to enhance the overall biodiversity value of the site.

CONTENTS

1	INTRODUCTION.....	3
1.1	Purpose of the report	3
1.2	Ecological context	4
2	BASELINE CONDITIONS	5
2.1	Baseline surveys.....	5
2.2	Habitats.....	5
2.3	Protected and rare species	5
2.3.1	Bats.....	5
2.3.2	Otters	5
2.3.3	Nesting birds	6
3	MANAGING IMPACTS ON ECOLOGY DURING CONSTRUCTION WORKS.....	7
3.1	Management of habitats	7
3.1.1	Urban trees	7
3.1.2	Adjacent watercourses.....	7
3.2	Mitigation for protected and rare species	8
3.2.1	Toolbox talks.....	8
3.2.2	Nesting birds	8
3.2.3	Foraging and Commuting Bats	8
4	HABITAT CREATION.....	10
4.1	Aims and objectives	10
4.2	Measures proposed to meet or work towards each objective	10
4.2.1	Objective A: to create green spaces and increase the flora on the site with fruiting and flowering species to provide a food source for local bird species	10
4.2.2	Objective B: to create and maintain green roofs and ensure their initial establishment and continued health.	11
4.2.3	Objective C: to include bird houses within the development to increase nesting habitat for birds	11
4.2.4	Objective D: to integrate bat boxes to create additional roosting habitat for bats	13
5	LONG TERM MANAGEMENT AND MAINTENANCE	17
5.1	Introduction	17
5.2	Management measures	17
5.2.1	Planting Management	17
5.2.2	Green Roofs.....	18
5.2.3	Bird nest boxes maintenance.....	19
5.2.4	Bat Box Maintenance	19
6	REFERENCES.....	20
7	FIGURES	21
	Figure 1 - Site location.....	22
	Figure 2 – Baseline Conditions.....	23
	Figure 3 – Landscape plan and habitats creation	24
 APPENDIX		
	APPENDIX 1 – FIVE YEAR MANAGEMENT AND MAINTENANCE PLAN	25
	APPENDIX 2 – ROLES, RESPONSIBILITES AND SIGN OFF.....	26

1 INTRODUCTION

1.1 Purpose of the report

This document is an ecological management and maintenance plan (EMMP) for the site referred to as Radcliffe Civic Hub. The location of the site and a red-line site boundary is shown in *Figure 1*. The report is also part of the evidence for LE05 unit of the BREEAM 2018 New Construction landscape and ecology assessment. The report is based on the draft landscape drawing *RADHUB-PIE-00-00-DR-L-0001Landscape General Arrangement (Planit-ID, 2022)* and *RADHUB-PIE-00-00-DR-L-0010 Ecological Enhancement (Planit-ID, 2023)*. Any revisions to the landscape plans or ecological enhancement plan will require updates to this document.

The proposals include:

- demolishing the Radcliffe South Block and the old TSB building (c. 0.6ha) shown in Plate 1,
- the erection of a three-storey civic hub building containing swimming pools, fitness suites and studios, indoor climbing facility, offices, cafeteria and library;
- linking block between Radcliffe Market and Market Chambers buildings, and
- refurbishment of the Market Chambers and the Market Hall basement, for use as a multi-use event space, with associated external alterations and works, as well as hard and soft landscaping.

The management strategy covers long-term management and maintenance of the site for the first five years following completion of the works.

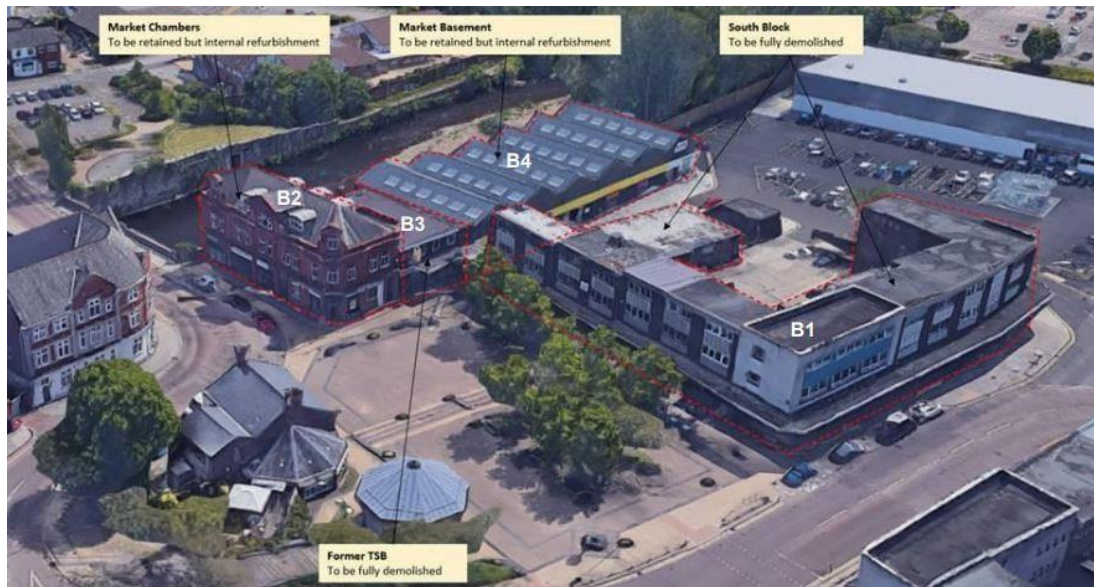


Plate 1 Proposed demolition and refurbishment plan for Radcliffe Hub

The scope of the EMMP includes:

- description and evaluation of the ecological baseline condition of the site;

- aims and objectives of management;
- management prescriptions for achieving aims and objectives; and,
- a site management schedule including responsibilities for the implementation of the plan.

This management strategy will ensure that there is an increase in the biodiversity value of the site.

1.2 Ecological context

The site includes a series of buildings including active and disused commercial and residential properties. Areas of hardstanding pavement surround the buildings, with scattered trees situated within the north and south-east of the site.

The site is located within a predominantly commercial area. The River Irwell defines the eastern site boundary, while commercial units are located immediately north and south of the site. Dale Street is located west of the site, with further commercial buildings located beyond. An area of deciduous woodland is located approximately 260 m south of the site, adjacent to the River Irwell. An active railway line bordered by deciduous woodland is situated approximately 370 m east of the site, at its closest point.

2 BASELINE CONDITIONS

2.1 Baseline surveys

A preliminary ecological appraisal (PEA) was completed by RSK in October 2020 (RSK Biocensus, 2021) to describe an ecological baseline for the site. The EMMP uses this baseline, against which the success of habitat creation and management can also be assessed.

2.2 Habitats

The c.0.6 ha site comprised the footprint of the existing Radcliffe Market Hall and hard-surfaced parking area at the front of the building, and hard-surfaced area to the north of the buildings (*Figure 2*). The site comprised Radcliffe Market Hall, which is made up of four buildings:

- the south block (B1),
- the market chambers (B2),
- former TSB (B3) and
- the market basement (B4).

Hardstanding, shrub planters and scattered trees were associated with the buildings. The River Irwell defines the eastern site boundary. No non-native invasive plants listed on Schedule 9 of The Wildlife and Countryside Act 1981 were recorded during the PEA survey. However, following this a non-native invasive species survey was conducted in 2021 due to finding Giant Hogweed and Indian Balsam alongside the River Irwell adjacent to the existing market chambers.

2.3 Protected and rare species

Habitats on the site were identified as having some suitability for protected species including bats, otter and nesting birds.

2.3.1 Bats

Surveys in 2020 found no bats to be roosting at the site. The site itself has low potential for foraging and commuting bats due to its small size and lack of diversity. The loss of any of the tiny areas of habitat on site would have a negligible effect on bats in the district. Pipistrelle and Myotis bats recorded foraging along the river will require a lighting scheme that minimises light spill on to the river, see section 3.2.3.

2.3.2 Otters

The River Irwell is located immediately east of the site. During the survey an assessment of the River Irwell was undertaken. Although there were no holts/ opportunities for holts along the eastern site's boundary, this is due to the limited vegetation cover and concrete walls, but the River Irwell is anticipated to be utilised by otter for commuting and foraging.

2.3.3 Nesting birds

The site offers suitable nesting habitat on the site for common bird species, including feral pigeon and house martin; the redevelopment of the site will require the demolition of the two buildings. Priority species identified by the BDS that may utilise the site or habitat directly adjacent to the site include dunnoek, house sparrow and starling. The market chambers onsite directly back onto the River Irwell, and holes and crevices in the wall provide potential nesting opportunities for sand martins.

A breeding bird survey was conducted on 26th May 2022. The targeted breeding bird survey also looked in detail at the adjacent River Irwell and the Radcliffe market chambers riverside wall as sand martins were known to be nesting. A colony of sand martins was recorded within the river wall of the existing marketplace with a minimum of five pairs recorded in holes close to Blackburn Street road bridge. Additionally, bullfinches, grey wagtail, feral pigeons, blackcap, robin, blackbird and goldfinch were also recorded within the site.

3 MANAGING IMPACTS ON ECOLOGY DURING CONSTRUCTION WORKS

3.1 Management of habitats

3.1.1 Urban trees

A number of small trees need to be removed during the construction of Radcliffe Civic Hub to enable new building construction. However, the larger urban trees around the existing bandstand and pub north of the site will be retained (as detailed in drawing RADHUB-PIE-00-00-DR-L-0013Tree Retention & Removals). An extract from this drawing can be seen in Plate 2.

Plate 2 RADHUB-PIE-00-00-DR-L-0013Tree Retention & Removals



Tree / shrub root systems could be harmed by severance from construction works or compaction of overlying soils from vehicle and plant tracking, and overhanging boughs could be damaged by vehicles. Precautionary measures as outlined in accordance with the British Standards Institute guidance "Trees in Relation to Design, Demolition and Construction - Recommendations" (BS 5837) (2012) should be followed. This involves installing Heras fencing along the root protection zones before any works commence. Monitoring and maintenance of this fence will be required throughout the works by an Ecological Clerk of Works (ECOW).

3.1.2 Adjacent watercourses

There is risk of accidental pollution to the River Irwell from construction works, especially as works to the Market Chambers will be completed via scaffolding and a floating pontoon in the river channel. In order to manage the risk of potential pollution entering the nearby watercourse and groundwater, a construction and environmental management plan (CEMP) should be prepared. This will include adhering to strict pollution prevention guidelines during the construction phase.

3.2 Mitigation for protected and rare species

3.2.1 Toolbox talks

Toolbox talks will be required prior to works to provide information to site workers on the impacts the development could have on nesting birds and commuting and foraging bats and how to mitigate these impacts during works.

3.2.2 Nesting birds

There is suitable nesting habitat on the site (the buildings, river wall crevices and scattered trees) and adjacent to the site (the River Irwell). The redevelopment of the site will require the demolition of two buildings and may also involve the pruning of the trees if the branches are too close to the planned development.

Removal of suitable nesting habitat should be conducted over the winter between October and February to avoid the breeding bird season (March to August inclusive). Where this is not possible, an ecology watching brief by an ecologist should check that no nesting birds are present, no more than 48 hours prior to vegetation being cleared.

Similarly, there should be a pre-demolition check of the building to check for nesting birds, if the building is demolished during the breeding bird season.

If nests are found, then works in the vicinity of the nest must temporarily cease and an appropriate exclusion zone must be established dependent on the species of bird and the nature of the works. The nest, and all vegetation within the exclusion zone, should then be left undisturbed until the young have fledged. All active birds' nests, regardless of species, are protected by law. A nest is deemed to be active even if it is in the process of being built and does not yet contain eggs or young.

It has been confirmed that VINCI Construction Ltd will prevent impact to nesting sand martins by completing a temporary block of potential nesting features within the River Irwell riverside wall, outside the nesting bird season. These features will remain blocked until after the works have been completed to discourage nesting sand martins from the area. Once the works have been completed, the temporary blocks will be removed to reopen the original nesting provision.

3.2.3 Foraging and Commuting Bats

No trees on the site were identified as suitable for roosting bats however, surveys on site recorded low activity by foraging and commuting bats. As such, recommendations that a lighting scheme is produced and that measures to ensure that any additional lighting during construction and post-construction as a result of the development is designed with the following principles.

- LED luminaires will be used where possible.
- A warm white spectrum (ideally <2700 Kelvin) will be used.
- Internal luminaires should be recessed where installed in proximity to windows to reduce glare and light spill.
- Any external security lighting will be set on motion-sensors and short (1 minute) timers.

- Lighting will be directed to only where it is needed and away from sensitive boundary features by using accessories such as cowls or hoods on the luminaries.

4 HABITAT CREATION

4.1 Aims and objectives

This section outlines aims and objectives for enhancing the ecology and biodiversity of the site. It provides details of the habitat creation and enhancements proposed as shown on the Ecological Enhancement drawing reference RADHUB-PIE-00-00-DR-L-0010 Ecological Enhancement.

Management and maintenance of new and existing habitats will be required to ensure habitat enhancement and creation is progressing towards the targets of this five-year management plan. These are detailed in Sections 5.

The aims of the habitat creation and enhancement measures are as follows:

1. to create new habitats on the site to enhance the ecological function and improve the overall biodiversity of the site;
2. to create nesting habitat for local bird species; and
3. to create habitat for bats.

Measurable objectives to meet these aims:

- A. to create green spaces and increase the flora on the site with fruiting and flowering species to provide a food source for local bird species;
- B. to create and maintain green roofs and ensure their initial establishment and continued health;
- C. bird houses within the development to increase nesting habitat for birds; and
- D. to provide bat roosting habitat.

4.2 Measures proposed to meet or work towards each objective

4.2.1 **Objective A: to create green spaces and increase the flora on the site with fruiting and flowering species to provide a food source for local bird species**

When developing in urban areas it is important to include green spaces and increase biodiversity where reasonably possible and appropriate. The existing site has limited natural habitats, therefore as part of the proposed landscape designs, the Radcliffe Hub site will include areas of planting at ground level including an evergreen and flowering native hedgerow, ornamental planting and 15 trees; the details of the planting and locations of these are illustrated on the Radcliffe Landscape General Arrangement (Planit-ID,2022). The planting will include a combination of low maintenance ornamental and native fruiting and flowing plant species. These will provide a food source for local birds. This measure is necessary to achieve credits under LE04 of the BREEAM 2018 landscape and ecology assessment. The new landscape trees will be native species where possible such as silver birch.

4.2.2 **Objective B: to create and maintain green roofs and ensure their initial establishment and continued health.**

A green sedum roof is to be installed on the existing bandstand roof as per the landscape plan. Green roofs are made up of a number of layers, typically a waterproofing layer, drainage layer, filter layer and green roof substrate. The structure and creation of the green roof is not discussed in detail in this report but the green roof will be a Sedum Blanket System SG202, with a 25mm sedum, 80mm growing medium, 46mm drainage board and protection fleece. This will provide habitat for insect species.

4.2.3 **Objective C: to include bird houses within the development to increase nesting habitat for birds**

Three sparrow terrace houses (nest boxes) should be incorporated onto the Market Chambers building along the riverside wall adjacent to the River Irwell to provide nesting opportunities for sparrows. Additionally, the existing trees surrounding the bandstand will have an additional three bird boxes. The bird boxes in the trees should provide nesting opportunities for a range of common bird species. The trees which don't feature nest boxes next to the bandstand are proposed at 8-10cm and 12-14cm girths which would not be strong enough to accommodate bird nest boxes. Proposed locations of these bird boxes are listed in the Ecological Enhancements Plan (Drawing Reference: RADHUB-PIE-00-00-DR-L-0010).

Sparrow terrace houses

- Sparrow terrace boxes can either be an integrated sparrow terrace brick, which will be built into the new development, adjacent to the River Irwell, in the location of the to be demolished TSB building or a hanging box which will be fixed to the Market Chambers building outer wall alongside the river. The sparrow terrace integrated brick box has two holes and two separate compartments allowing multiple nests spaces for social breeds of birds. These boxes are suitable for a variety of bird species including the house sparrow;
- The Sparrow Nest Box System is a modular system of externally fixed nest boxes. Each box can be used either on its own or fit together with others in an arrangement of the client's choice. Ideally, they would be grouped in threes to allow multiple nesting provision together, mimicking how sparrows would naturally nest.

Bird boxes for a range of species

- A standard tree bird box usually consists of a 32mm single entrance hole which allows the entire internal area to be available for nesting and roosting. These can be suitable for a range of bird species such as members of the tit family and sparrows. They are available in a range of options including wooden or woodstone (wooden fibres mixed with concrete). Options are shown below.

Plate 3. Types of sparrow terraces that could be included into the design of the Radcliffe Hub

<i>Integrated sparrow terrace brick</i>	
<i>Wooden sparrow terrace modular nest box¹</i>	
<i>Sparrow 1SP Schwegler terrace box² (both integrated or externally fixed)</i>	
<i>Vivara Pro WoodStone sparrow terrace box³ ((both integrated or externally fixed)</i>	

¹ <https://www.nhbs.com/search?q=sparrow>view=162118>

² <https://www.nhbs.com/1sp-schwegler-sparrow-terrace?bkfno=185100>

³ <https://www.nhbs.com/search?q=sparrow>view=195281>

Plate 4. Types of standard bird boxes for trees that could be included into the design of the Radcliffe Hub

<i>Standard wooden nest box⁴</i>	
<i>Vivara Pro Seville 32mm WoodStone Nest Box⁵</i>	

Installation

Three sparrow terraces are to be incorporated into the construction of the new building including one near the riverside bridge, one located on the new building at the site of the demolished TSB building and one further south along the Market Chambers wall. These locations will provide good accessibility to the river corridor which will provide nesting material and food sources for local birds. They should all have a clear flight path in front of the entrance and be 2-3m above flood level.

Additionally, three standardised bird nest boxes will be placed within the existing trees surrounding the bandstand, ideally 4m high. We have chosen to only incorporate three into the design, as is not advisable to place many boxes with identical dimensions close together due to individuals of the same species not tolerating each other's presence, especially in urban environments where food resource is limited.

4.2.4 Objective D: to integrate bat boxes to create additional roosting habitat for bats

Two bat boxes will be mounted on trees within the existing site surrounding the existing bandstand and three to the River Irwell wall of the development, as per the manufacturer's instructions. This will increase the roost resource of this area within the existing natural features of the site. The material of the box will be made from an

⁴ <https://www.nhbs.com/nhbs-wooden-bird-nest-box>

⁵ <https://www.nhbs.com/vivara-pro-seville-32mm-woodstone-nest-box>

insulating material such as wood or a special waterproof wood/concrete compound. Due to the positioning, the boxes will need to be self-cleaning boxes. The location along the riverside wall will also make it harder for them to be damaged or vandalised. Examples of bat boxes which could be used are shown below in Plate 5. Three externally fixed bat boxes could be used along the River Irwell market chambers wall, however during the construction of the new building in the location of the demolished TSB building a integrated bat brick could be used. This decision will be decided by VINCI construction Ltd. See the Ecological Enhancements Plan RAD-HUB-PIE-00-00-DR-L-0010 for proposed locations.

Plate 5. Types of bat boxes/bricks that could be included into the design of the Radcliffe Hub

<i>Integrated bat brick⁶</i>	
<i>Vincent Pro Bat Box⁷</i>	

⁶ <https://www.greenandblue.co.uk/products/bat-block-bat-brick>

⁷ <https://www.nhbs.com/vincent-pro-bat-box>

<i>Chambord Wooden Bat Box⁸</i>	
<i>Beaumaris Woodstone Bat Box⁹</i>	
<i>2F / 1FF Schwegler Bat Boxes</i>	

Installation

Bat boxes are to be installed following the manufacturer's instructions; however, the following measures should also be considered (Bat Conservation Trust, date unknown):

⁸

https://www.nhbs.com/search?q=bat%20boxes&hPP=60&idx=titles&p=1&fR%5Bdoc_s%5D%5B0%5D=false&fR%5Bhide%5D%5B0%5D=false&fR%5Blive%5D%5B0%5D=true&qtview=200880

⁹ <https://www.nhbs.com/beaumaris-woodstone-bat-box?bkfno=231796>

- boxes should be fixed at a height of approximately four metres on a tree, if it is safe to do so;
- be mindful that the location will be safe from predators such as cats;
- boxes should not be placed above public walkways (this will minimise the likelihood of vandalism);
- boxes should be sheltered from strong winds and exposed to the sun for part of the day (usually south, south-east or south-west);
- it is always best to provide a number of different options for bats so that they can choose the most appropriate temperature based on their needs. This can be achieved by grouping a number of bat boxes each with a different aspect; two or three boxes is preferable to one, although a single box still has a chance of being used depending on the bat species that use the local area;
- bat boxes should be installed away from artificial light sources and no light should spill into the area where the box is placed;
- ensure the bats approach to the box is not impeded;
- use galvanised or stainless-steel screws or nails that will not rust; and
- consideration should be given to tree growth and boxes may need rehanging over time, regularly check boxes to assess this. Use headless or domed nails not fully hammered home to allow the tree growth, again regular checks will ensure that this allowance can be made while still being securely fitted. Iron nails can be used on trees with no commercial value. Copper nails can be used on conifers, but aluminium alloy nails are less likely to damage saws and chipping machinery.

5 LONG TERM MANAGEMENT AND MAINTENANCE

5.1 Introduction

This section provides recommendations for the ongoing management of the habitats and features described in Section 4. Long-term management will help achieve and maintain the aims and objectives, and is required in order to maintain and enhance the biodiversity value of the created features. The details of appropriate timings for different aspects of the management plan are detailed in *Appendix 1*; and a list of the key personnel responsible for ensuring each task is undertaken appropriately and in line with this management plan is given in *Appendix 2*, including date and sign off tabs.

5.2 Management measures

Appropriate management of the planting and bird and insect homes will enhance conditions to encourage birds and invertebrates to forage and nest around the building.

5.2.1 Planting Management

Trees and Shrubs

All Year Round

- Tree stakes and ties will be inspected and maintained if loose, broken, decayed or removed if no longer required.

Winter Maintenance (October – February)

- Any low-growing shrubs will be cut back at least every other year to encourage healthy, bushy growth, and to increase the number of flowers produced.
- Any tree or shrub pruning will be kept to a minimum, but will be carried out over winter as required (e.g. where branches become dangerous) - although the pruning of young trees will be avoided during the late winter and early spring sap-flow period. Pruning will be in accordance with good horticultural and arboricultural practice (i.e. do not damage or tear the stem or bark and keep wounds as small as possible and cut cleanly back to sound wood).
- All dead, dying and diseased plant material will be removed and replaced with like for like planting at the end of the growing season during autumn (i.e. from 1st November up to 30th December of each year of maintenance).
- Undertaking pruning work over the winter will also avoid the nesting bird period, which is February to August inclusive.
- Late-winter pruning (where possible) will allow increased opportunities for birds and insects to harvest fruits.

Summer Maintenance (March – September)

- An organic fertiliser will be applied between March and April.

- To allow the establishment of new planting, planted beds will be kept clear of weeds by maintaining mulch and hand weeding.
- Only natural herbicides or pesticides will be used, and only if required.

Herbaceous plants

All Year Round

- Herbaceous planting will be inspected and any dead, dying or diseased plants will be noted. Plants will be watered during hot, dry weather.

Winter Maintenance (October – February)

- Herbaceous plants will be cut back as required, annually if appropriate. This will encourage healthy, bushy growth, and increase the number of flowers produced.
- All dead, dying and diseased plant material will be removed and replaced with like for like planting at the end of the growing season during Autumn (*i.e.* from 1st November up to 30th December of each year of maintenance).
- Late-winter pruning (where possible) will allow increased opportunities for birds and insects to harvest fruits.

Summer Maintenance (March – September)

- An organic fertiliser will be applied between March and April.
- To allow the establishment of new planting, planted beds will be kept clear of weeds by maintaining mulch and hand weeding.
- Only natural herbicides or pesticides will be used, and only if required.

5.2.2 Green Roofs

Initial maintenance

- The area will need to be watered and kept moist for 4 – 6 weeks after installation to ensure establishment. However, this is weather dependent.
- It is recommended that maintenance is conducted by qualified personnel, typically the installing contractor during the establishment phase (between 12 and 15 months).
- Planting will be inspected, and any dead, dying or diseased plants will be noted.

Annual maintenance (all years)

- The drainage system should be cleared of vegetation twice a year.
- Herbaceous plants will be cut back as required, annually if appropriate. This will encourage healthy, bushy growth and increase the numbers of flowers produced.
- All dead, dying and diseased plant material will be removed and replaced with like for like planting at the end of the growing season during autumn (*i.e.* 1st November to 30th December).

- To allow the establishment of new planting, planted beds will be kept clear of weeds by maintaining mulch and hand weeding.
- Only natural herbicides or pesticides will be used, and only if required.

5.2.3 Bird nest box maintenance

All bird boxes should be cleaned out once a year and put back in place ready for the following nesting season. Hole-fronted boxes are best cleaned out in October as some boxes may be used over the winter as roosting sites for smaller birds such as Wrens.

Any old nests should be removed from the boxes entirely and the House Sparrow and Swift boxes should preferably be cleaned with boiling water to kill-off any remaining parasites. The boxes should then be replaced in their original position.

A clear flight path should be maintained in front of the box entrances.

The sparrow terraces along the River Irwell will not be regularly cleaned out due to the difficult position for access, however they will be subject to a condition check using binoculars from a nearby viewpoint to ensure no maintenance is required.

5.2.4 Bat box maintenance

Bat boxes will be monitored once a year for five years, post construction to confirm the presence/absence of bats and use of bat boxes. The optimal time to conduct this survey will be in September of each year (within the bat breeding season) as there would likely be more evidence of use. All monitoring will be conducted by an appropriately licensed bat ecologist. Monitoring will consist of a check of the box for evidence of use. Some bat boxes will become occupied by nesting birds and those occupied by bats may harbour various ectoparasites. Bat boxes positioned in trees will be cleaned out annually, outside of breeding bird season. Due to the positioning of the bat boxes along the River Irwell and the potential integration of a bat brick at this location, these boxes will be self-cleaning given the difficulty to access from the riverside.

6 REFERENCES

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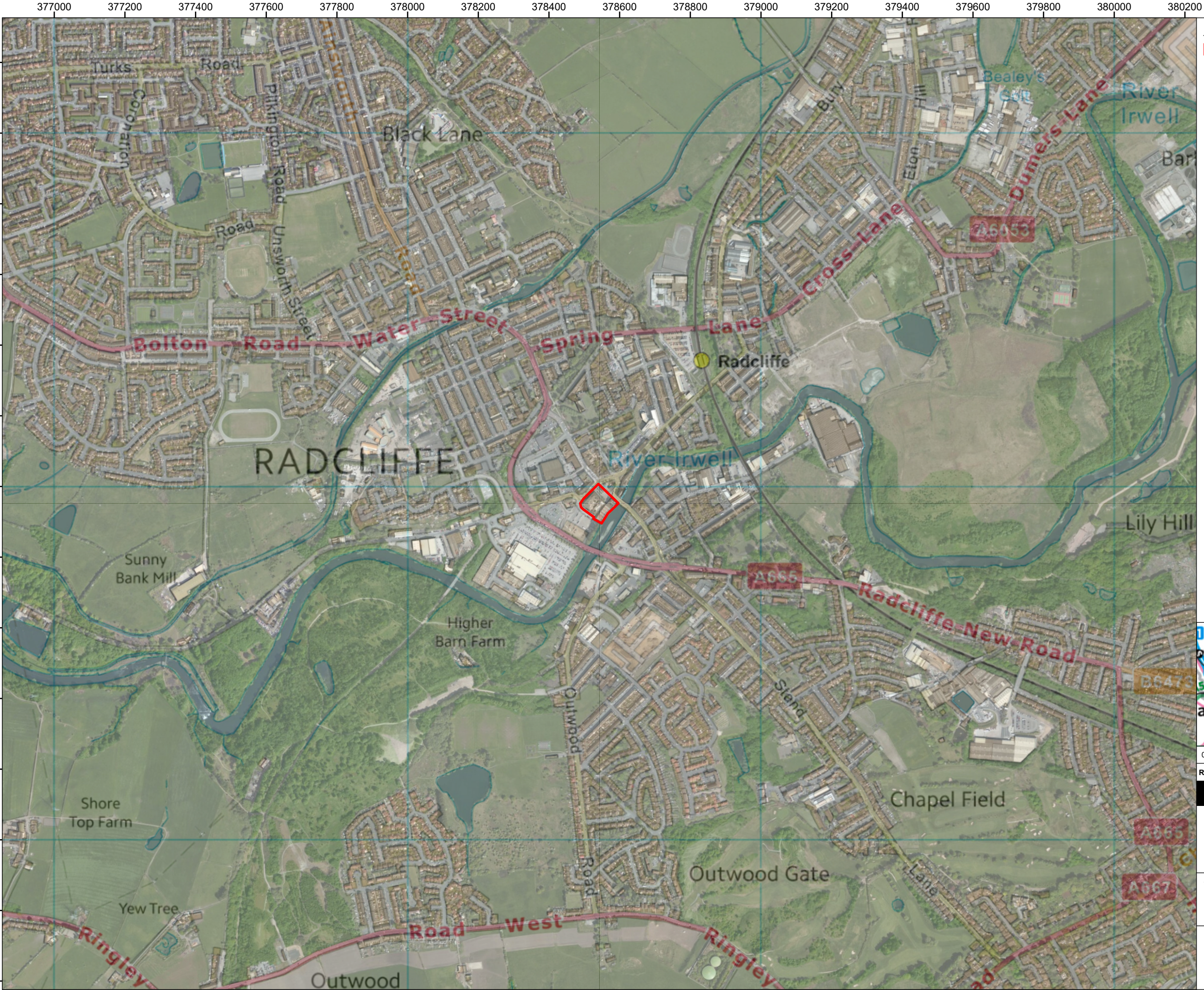
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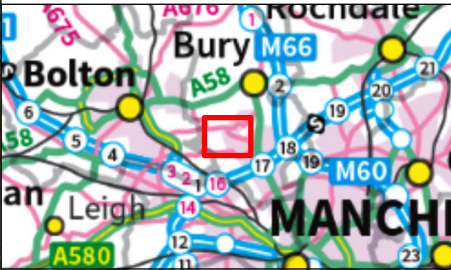
7 FIGURES

- Figure 1 - Site location
- Figure 2 - Baseline conditions
- Figure 3 - Landscape plan and habitat creation

Figure 1 - Site location



Legend:
[Red Square] Site Boundary



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TITLE: Figure 1:
Site Location Plan

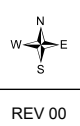
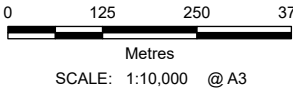
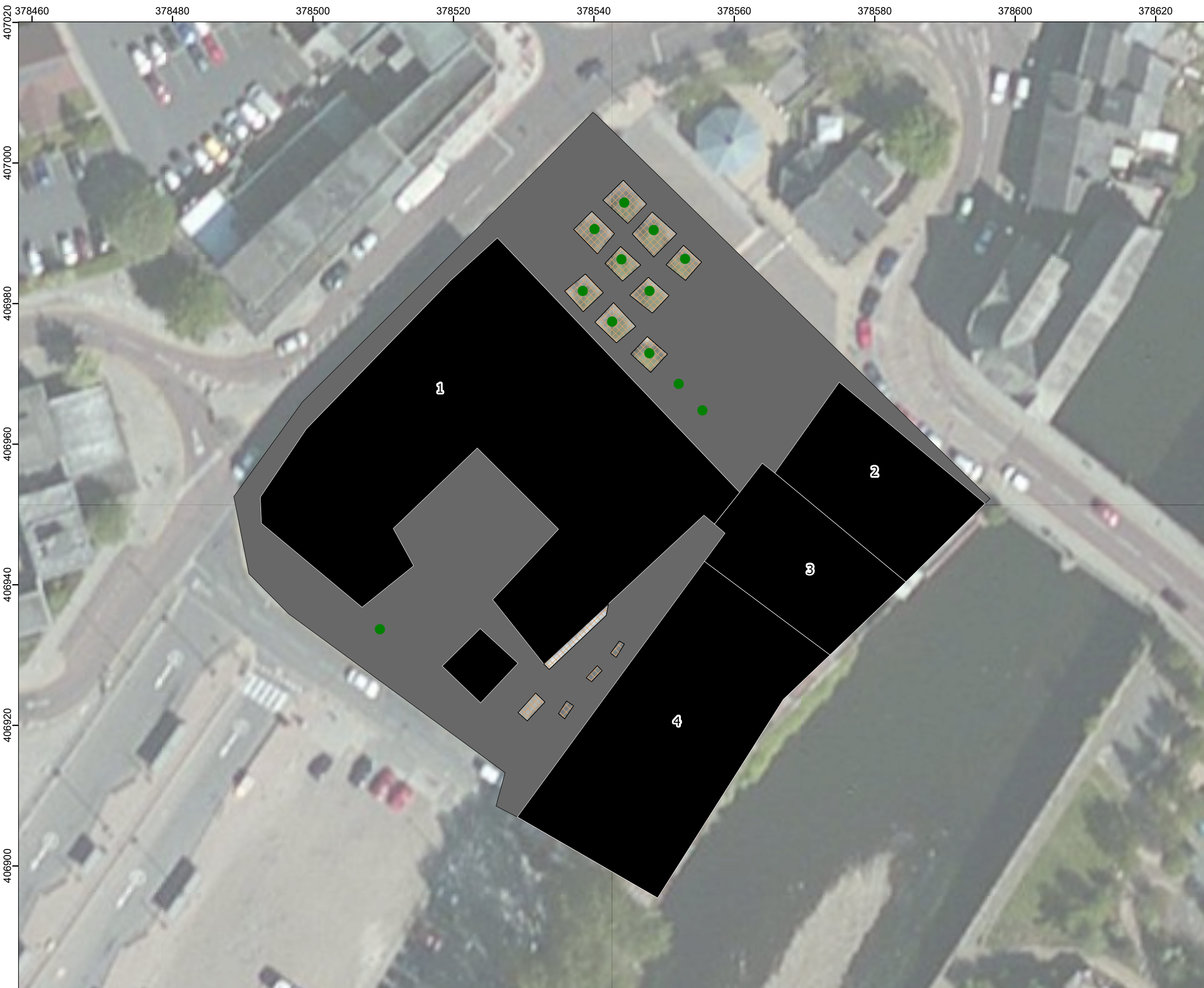
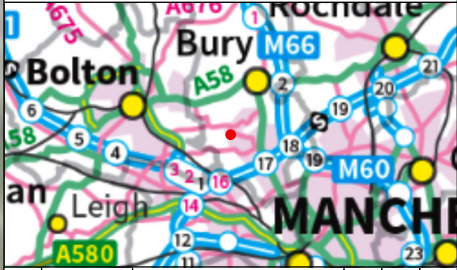


Figure 2 – Baseline Conditions



- Legend:**
- Scattered broad-leaved tree
 - Introduced shrubs
 - Building
 - Hardstanding



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TITLE: Figure 2:
Phase 1 Habitat Survey

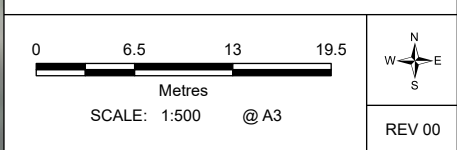
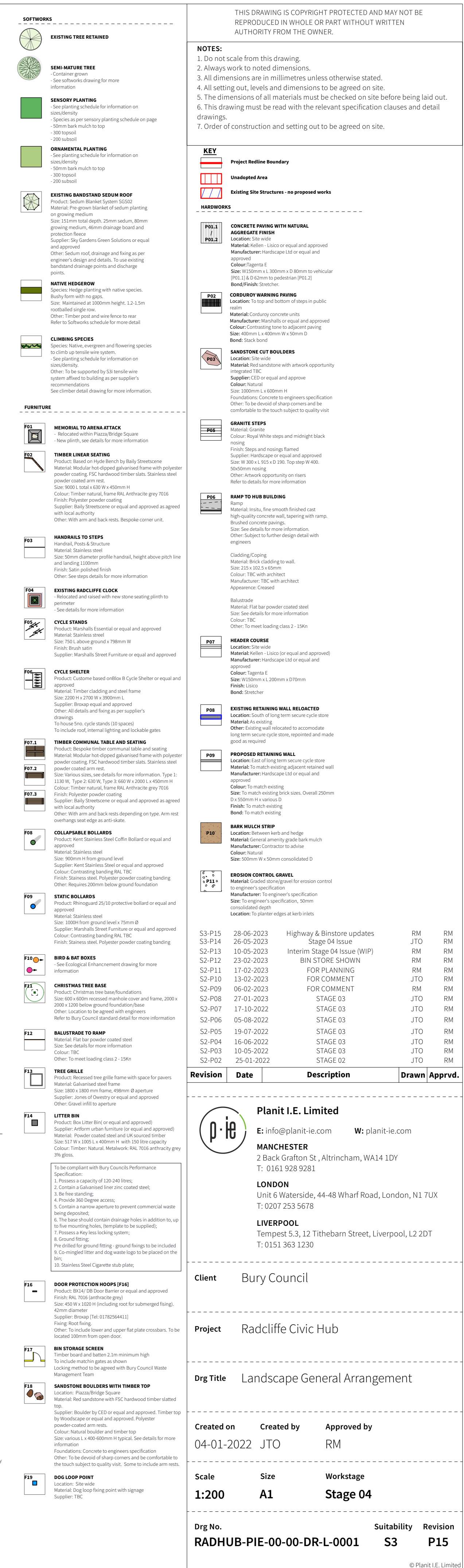


Figure 3 – Landscape plan and habitats creation



APPENDIX 1 – FIVE YEAR MANAGEMENT AND MAINTENANCE PLAN

Task	Construction Phase	Year 1	Year 2	Year 3	Year 4	Year 5
Planting	Planters on ground level to be created in accordance with the design drawings	All plants will be inspected, and any dead, dying or diseased plants should be replaced. Pruning to be carried out in autumn / winter to avoid nesting birds and provide extended foraging time for birds and insects. Late winter pruning is ideal for mature shrubs and trees.	Same as previous year.	Same as previous year.	Same as previous year.	Same as previous year.
Bird nest boxes	Install bird boxes after the construction of the building	The bird boxes should be inspected and cleaned out once per year between October to February to avoid breeding birds.	Same as previous year.	Same as previous year.	Same as previous year.	Same as previous year.
Bat boxes	Install bat boxes in trees and also within riverside wall	Bat boxes should be inspected for damage/vandalism	Same as previous year.	Same as previous year.	Same as previous year.	Same as previous year.
EMMP management and review	Review regularly through the construction phase and upon completion of planting and installation of bird and bat boxes	Review annually to ensure management is being carried out and methods are appropriate. We recommend this check be completed after the above management is undertaken (October – February)	Same as previous year.	Same as previous year.	Same as previous year.	Same as previous year.

APPENDIX 2 – ROLES, RESPONSIBILITIES AND SIGN OFF

Phase	Task	Person Responsible	Date completed	Sign off
Construction / build phase	Planting			
	Bird brick houses installation			
	Bat box Installation			
	EMMP management and review			
Year 1	Planting maintenance			
	Bird brick houses maintenance			
	Bat box maintenance			
	EMMP management and review			
Year 2	Planting maintenance			
	Bird brick houses maintenance			
	Bat box maintenance			
	EMMP management and review			
Year 3	Planting maintenance			
	Bird brick houses maintenance			
	Bat box maintenance			
	EMMP management and review			
Year 4	Planting maintenance			
	Bird brick houses maintenance			
	Bat box maintenance			
	EMMP management and review			
Year 5	Planting maintenance			
	Bird brick houses maintenance			
	Bat box maintenance			
	EMMP management and review			