

Technical Note

Project Mayfield
Subject Update Ecology Strategy with Biodiversity Net Gain - Phase 1
Project no 0046688
Date 11 October 2021

Revision	Description	Issued by	Date	Approved (signature)
00	Draft Ecology Strategy	PO	15/03/2019	HD
01	Updated with DRE comments and Biodiversity Net Gain calculations	PO	29/08/2019	JR
02	Updated to include specific Phase 1 Biodiversity Net Gain calculations compared with survey site calculations	JR	06/09/2019	PO
03	Finalised with DRE comments	CF	26/09/2019	HD
04	Updated Ecology strategy, final for issue	JR	11/10/2021	PO

1 Introduction

1.1 Background

This Update Ecology Strategy for Mayfield sets out the detailed ecological features provided within the Mayfield Park and provides the updated biodiversity net gain calculations undertaken following a design review of the Park. As well as addressing the Park design amendments, the updated biodiversity net gain calculations are also based on detailed planting designs which have been produced for the Park as a whole in order to discharge planning conditions and allow the delivery of the Park to commence.

This document updates the previous Ecology Strategy produced for, and appended to, the 2019 Environmental Impact Assessment (EIA) Ecology chapter. It continues to demonstrate how the Mayfield development aligns with the broad principles set out within the original Mayfield Strategic Regenerative Framework (SRF) (2018), but now provides detail of the ecological elements within the approved design of the Park which support the Natural Capital objective of the Mayfield SRF to 'increase biodiversity and public access to green space'.

This Update Ecology Strategy document will illustrate the new levels of biodiversity net gain delivered by the Park, identifying what the changes in design and development of detailed planting proposals mean for biodiversity net gain in terms of both the Phase 1 development and the wider SRF as a whole.

Figure 1-1 indicates the boundaries of interest as referred to in this document. The orange line indicates the wider Mayfield (SRF) boundary as detailed within the strategy. The purple line indicates the extent of ecological surveys (the survey site) for the expected development areas within the SRF requiring habitat removal and building demolition. The red line indicates the Phase 1 application boundary, including additional highways improvements to the south west of the SRF boundary.

1.2 Overview

1.2.1 Mayfield draft SRF (adopted February 2018)

The Mayfield SRF recognises that naturalising the River Medlock channel offers significant opportunities to enhance the river corridor for both people and wildlife. It proposes creation of a central park with soft river edges and setback for the river margins to establish a variety of wetland habitats to improve access to the river, as well as provide biodiversity benefits. It proposes that much of the riverbank should be rededicated to ecology and nature.

Although not specifically addressed in the SRF, a range of national and local legislative and policy requirements to protect, retain and enhance the ecology of the site has also influenced the design. This includes national legislation offering legal protection for some wildlife species and identifying habitats and species of principal importance to biodiversity in the UK, some of which occur on or near the Mayfield site. In addition, requirements for biodiversity net gain, which leaves biodiversity in a better state than before development, are already embedded in national and local environmental policy and strategy with emerging strategies placing increasing weight on biodiversity and green infrastructure.

1.2.2 Phase 1

The delivery of the Mayfield development will progress in phases over a number of years. The first phase (Phase 1), will deliver the majority of Mayfield Park, Baring Street Office 1, Baring Street MSCP (Application 1) and, Baring Street Office 2 (Application 2). Aspects of the Phase 1 development have differing levels of available information. The Park, for example has now undergone detailed design to discharge planning conditions and commence works on site. Design for the developed plots (Baring Street Office 1, Baring Street MSCP and Baring Street Office 2) is continuing to develop at different rates as they come forward for reserved matters applications. Information relating to the evolving design of the developed plots is not included within this Updated Ecology Strategy, which otherwise has a focus on the Park. Future updates will be required to detail the design of ecological mitigation and enhancement measures within the developed plots, where relevant.

1.2.3 Biodiversity net gain

Biodiversity net gain was used in the previous Ecology Strategy to quantify the benefits for biodiversity as a result of the proposed development at Mayfield, both in terms of the Phase 1 development site as well as the wider SRF as a whole. The assessment takes into account the value of existing habitats across the site and identifies those that are to be lost as well as those which will be retained and/or enhanced through the post-development landscape design and management.

Due to the changes to the Park design and river corridor and the development of detailed planting palettes for post-development landscaped areas within the Park (as summarised in section 2), this Update Ecology Strategy provides an update to the biodiversity calculations to demonstrate what the Park now delivers for both Phase 1 and the wider SRF.

Outside of quantifiable net changes in habitat value, this Update Ecology Strategy will also detail the habitat features provided within the detailed Park design to support protected, priority and notable species within the Mayfield development.

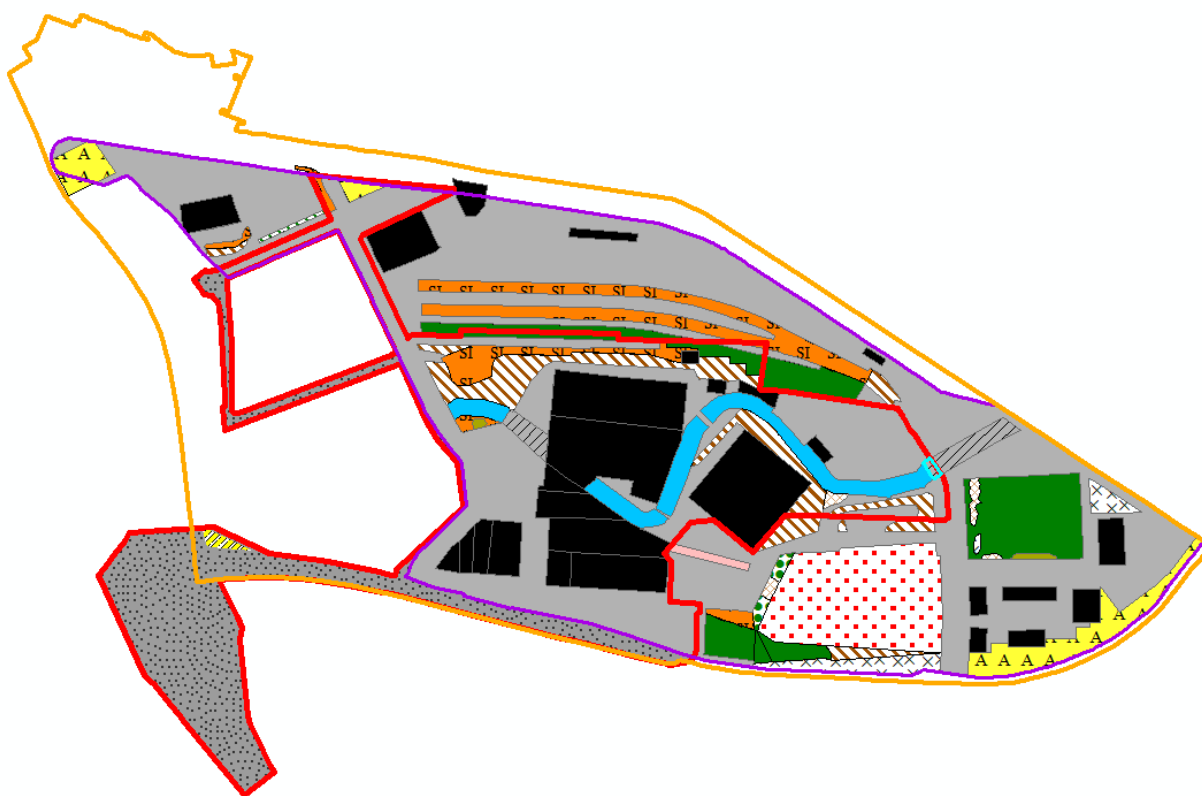


Figure 1-1 Illustrating site boundary context

1.3 Aims and objectives

The aims and objectives as outlined in the previous Ecology Strategy remain relevant in this Update Ecology Strategy. The key aim is to apply the mitigation hierarchy at all stages of development design to achieve biodiversity net gain in line with best practice. In summary, the objectives are to:

- Retain and enhance existing habitats where possible;
- Replace ecologically valuable habitats which will be removed as part of the works;
- Replace and enhance habitats for local and UK biodiversity priority species; and
- Maintain and improve, where possible, ecological connectivity and functionality across and beyond the site.

2 Summary of changes to the scheme

A number of changes to the design of the proposed Park have been made since the previous Ecology Strategy was produced. These will have knock-on effects for the biodiversity net gain scores as they intrinsically alter the provision of post-development habitat types and areas which can be implemented within the scheme. These changes are divided into two distinct sections as identified below. These include the material changes to the Park layout and design and the changes to the proposed habitats as presented in the biodiversity metric as a result of detailed planting palettes developed to discharge relevant planning conditions against the Park.

2.1 Park layout changes

Due to further considerations of the design of the Park and site layout for Phase 1 of the Mayfield development following planning submission in 2019, amendments to the proposed Park design were made which are summarised as follows:

- Phasing: the park is now proposed to come forward in a single phase, rather than in three separate phases.

- River walls, silted banks, floor areas and green corridor: rather than removing the existing river walls to the River Medlock and replacing these with new flow control elements, these will predominantly be retained, adapted and refurbished.
- Relocation of areas: the former 'wetland area' to the north east of the site is to become the 'Play Yard'. The former play yard area, where Dirt Factory is currently located, will become the new 'wetland area' and will provide areas of flood compensation and manage flood risk on site, up-stream and downstream in line with the new river design. This will also relocate and change the type of new habitat areas within the park compared to the approved scheme.
- Circulation: the existing bridges on site will be retained and upgraded as part of the revised scheme. The park layout and routes have been refined so that all routes through and circumnavigating the site are accessible to those with mobility impairments. Where steps are proposed, an alternative level access route is provided.
- Park entrance: additional entrance proposed to allow for access to Baring Street to improve connections and permeability.

The most notable changes in terms of affecting the Ecology Strategy is the changes to the treatment of the River Medlock and the increased retention of the existing river walls. This reduces the extent to improvements which can be applied to the River Medlock and it's corridor as well as limiting the amount of area which can provide a naturalised bank with emergent and wetland habitat types. As wetland and riparian habitat was valued as a 'high' distinctiveness habitat within the original biodiversity net gain assessment, this provided a large proportion of the net gain value for the site.

2.2 Proposed habitat changes

In addition to the redesign of the Park layout, the detail of the planting strategy has been updated in order to discharge conditions and facilitate the commencement of construction of the Park. These changes included:

- Revised tree planting and soft landscaping: following the decision to bring the park forward in a single phase, the tree and planting schedule has been revised. This has been discussed with the City Council's Arborist on 09 October 2020 and further reviews on 11 January 2021 with the EA and GMEU, with subsequent email and telephone follow up as necessary.

Within the strategy submitted as part of the Park design to support the 2019 planning application, the Park included eight distinct habitat types. Of these the wetland/river mosaic habitat and wild meadow habitats were considered likely to be high distinctiveness habitat types with native species mixes providing a 'good' condition. Other habitats including grassland, woodland and scrub were considered likely to be of moderate distinctiveness but also containing native species only to provide a 'good' condition.

Finalised Park planting designs provided different habitats in revised planting areas which contained a balance between native and non-native species planting. Areas of wetland habitat have retained a native species only mix due to their proximity to, and interaction with, the ecologically important river corridor. Other habitats across the site typically balance between native and non-native species mixes, with some being almost entirely non-native as befits urban park design. Where possible, efforts have been made to include species that provide benefit to native pollinators as included on the Royal Horticultural Society's 'Plants for Pollinators' list. These help to increase the condition score of non-native habitats as they have more value for native wildlife, however the general extent of habitats considered to be in a 'good' condition, as defined by the Biodiversity Metric, is less than anticipated at the 2019 outline planning stage.

3 Ecological baseline

3.1 Habitats

At the time of producing this Update Ecology Strategy, works to construct the Park on site have commenced, with a large amount of demolition and earthworks having taken place across the Park area. Works included the partial removal of the Baring Street culvert which was identified to contain a bat roost through previous ecological surveys undertaken on the site. A licence was obtained from Natural England ahead of these works commencing, and was submitted to Manchester City Council to discharge the relevant planning condition.

The clearance works as outlined above provide a new baseline for the Phase 1 and survey site, with less ecological diversity due to habitat removal in the form of scattered scrub, trees and semi-improved grassland. Therefore, as applied in the previous Ecology Strategy and within the 2019 ES Ecology chapter, the baseline as surveyed in 2017 will be used for the biodiversity net gain calculations in order to reflect a true change in habitats for the proposed Phase 1 and wider Mayfield development area.

Habitats recorded across the survey site include buildings (occupied and derelict), the disused railway depot, the culverted and canalised River Medlock, extensive areas of hardstanding and a range of semi-natural habitats typical of urban brownfield sites.

3.2 Key species

Small bat roosts are present in four locations including a culverted section of the River Medlock. Vegetation along the river corridor is dominated by the invasive plant Japanese knotweed, but also provides an important foraging and commuting corridor for bats. The habitat on site is also considered suitable for the black redstart, a rare breeder in the UK that is known to occur near the Mayfield site.

4 Strategy

The 2019 Ecology Strategy identified how the Mayfield Park will deliver mitigation for habitat loss, biodiversity for the wider SRF and enhancements for protected and priority species. The extent to which the Park delivers has changed as a result of the amendments to the scheme as identified in section 2. Therefore, the below strategy reflects the updated measures which will be implemented within the Park.

The Park within the redevelopment continues to offer opportunities to enhance the biodiversity of the site and deliver biodiversity through a network of green infrastructure, including landscaping with native species and replacement tree planting, incorporation of wildlife planting including for pollinators, the creation of biodiverse roofs and the provision of habitat features following the amendments to the scheme.

It is intended that Mayfield Park will deliver the mitigation for the loss of habitats within the survey site, providing replacement and compensatory habitat, however it is no longer considered to deliver the biodiversity net gain for the wider Mayfield SRF site as a whole (see section 1), but still provides a substantial net gain for Phase 1 in isolation. Therefore the strategy now is for Mayfield Park to deliver the majority of the habitat loss mitigation for the SRF whilst provide meaningful enhancements to key ecological features such as the River Medlock by including:

- Enhancement of the river corridor for both people and wildlife and the emerging park design by incorporating a variety of features to naturalise and 'daylight' the **River Medlock**, a UK and Manchester priority habitat:
 - Maximise the use of soft and bioengineering solutions where river walls will be removed. This will enable a variety of wetland habitats including marginal and emergent planting to be created to provide biodiversity benefits, reduce flood risk and improve access to the river in certain locations.
 - Provide setbacks from the river corridor, even where walls remain, to green the river corridor edges. This will improve the setting of the river where hard engineering solutions are retained. A variety of native and non-native planting soften the visual of the hard-engineered river edges providing resource for local wildlife.
 - Creation of riffles and associated pools in the riverbed to increase oxygenation and provide habitat for fish such as brown trout and aquatic invertebrates.
 - Incorporation of artificial nest boxes for nesting habitat for kingfisher, dipper and wagtail in the river edge design.
 - Retention of a sufficiently dark river corridor to ensure continued use by bats. A sensitive lighting plan has been produced and demonstrates how light spill is minimised within the river corridor while still maintaining health and safety requirements for public realm areas.
- Removal of Japanese knotweed, undertaken by specialist contractors with a long-term strategy for management of invasive plant species, will further improve the ecology of the river corridor.

- Urban green space is a priority habitat within the Manchester BAP and there are a number of priority and protected species strongly associated with urban green space and the built environment including pipistrelle bats, peregrine falcon and swifts. Soft landscaping and provision of habitat features targeted at urban-adapted priority species will mitigate the impact of the development on these species and provide biodiversity enhancement.
- Demolition/conversion works to buildings and culverts which contain bat roosts will be carried out under licence from Natural England with provision of replacement roosting habitat along the river corridor.
- As development of the site will result in loss of potential habitat for black redstart, replacement brownfield habitat is recommended within the adjacent developed plots in the form of biodiverse/brown roofs, living walls, perching posts and nest boxes close to the river. This support the developed plots contribution in achieving biodiversity net gain across the wider SRF.
- Provision of replacement nesting habitat for generalist bird species to replace lost nesting opportunities following vegetation removal.
- Incorporation of plant species which are native and/or of known benefit for pollinators and other invertebrates in combination with provision of habitat features to support resting/hibernating invertebrates will contribute to meeting the targets of the National Pollinator Strategy as well as deliver biodiversity net gain.
- Pre-clearance checks of vegetation and buildings for nesting birds within the main breeding season (March to September) to remain legally compliant.

5 Biodiversity net gain calculations

5.1 Methodology

5.1.1 Approach

Since the Ecology Strategy was produced in 2019 and the supporting biodiversity net gain calculations were undertaken, the Natural England Biodiversity Metric has gone through several updates, with the Biodiversity Metric 3.0 released in July 2021. However, to maintain consistency with the previous biodiversity net gain approach, and to illustrate the comparative changes to the net gain score as a result of the scheme changes, the updated biodiversity net gain calculations have been undertaken using the same, older, version of the Natural England Biodiversity Metric 2.0. In the version of the Biodiversity Metric 2.0 originally used, the river was assessed as an area, not linear, feature and is included within the habitat calculations, rather split into a separate river assessment section which is the approach in the later versions of the metric.

The metric uses habitat to describe biodiversity, which is converted into measurable 'biodiversity units' according to the area of each type of habitat. The metric scores different habitat types (e.g. river, scrub) according to their relative biodiversity value, taking into consideration the condition and location of the habitat. In addition, the post-development calculations include three additional factors for new or enhanced habitats: difficulty of creation/restoration, temporal risk of delivery and spatial risk of delivery.

The metric does not incorporate consideration of protected or priority species and these have been provided for separately, as demonstrated in section 5.3.

In line with the Ecology Strategy, two calculations have been undertaken to demonstrate the change in habitat value of the site with regards to the wider Mayfield SRF development as well as the Phase 1 area specifically. For clarity, the calculations presented here include the summary result tables for the calculations presented in the Ecology Strategy to illustrate how the post-development habitat value has changed as a result of the scheme changes and detailed design process.

In contrast to the Ecology Strategy in 2019, the post-development habitat value is based on detailed planting plans, areas and palettes, which have been designed by the landscape architect Studio Egret West, in consultation with Buro Happold Ecologists and consultees including the Environment Agency and Greater Manchester Ecology Unit. These plans were

developed to support the discharge of planning conditions to facilitate the Park construction, and so are considered to be an accurate representation of the habitats which will be implemented within the Park area once complete. The landscape general arrangement plan is provided in Appendix A.

5.1.2 Assumptions

A number of assumptions have been made in order to prepare these calculations.

As in the Ecology Strategy, the pre-development calculations are based on the Phase 1 habitat survey completed in 2017¹ shown in Figure 5-1. The GIS layers of the site and the habitats classified during the Phase 1 habitat surveys have been used to generate the areas used in the calculations. As the survey was undertaken using the Phase 1 habitat methodology, and not necessarily to directly support biodiversity net gain calculations, habitat types have been translated from the Phase 1 typologies to the UK Habitat Classification typologies adopted within the Biodiversity Metric. Where relevant, species lists have been used to support this, along with the condition assessment of the pre-development habitats as defined within the Biodiversity Metric supporting technical documents.

As part of the Phase 1 calculations, habitats outside of the redline boundary are not considered as it is assumed all will be retained until subsequent phases are brought forward. Additional highway and public realm improvement works outside of the SRF boundary have been included and are demonstrated in Figure 5-2.

No allowance for landscaping within the development plots of the Baring Street Office 1, Baring Street MSCP, Baring Street Office 2 or highway and public realm improvements outside of Mayfield Park has been made. Hard landscaping has been applied to these plots outside of the built structures. As design progresses for these development plots, any soft landscaping should be incorporated into the biodiversity net gain calculations to account for the additional habitat value they will contribute to the site.

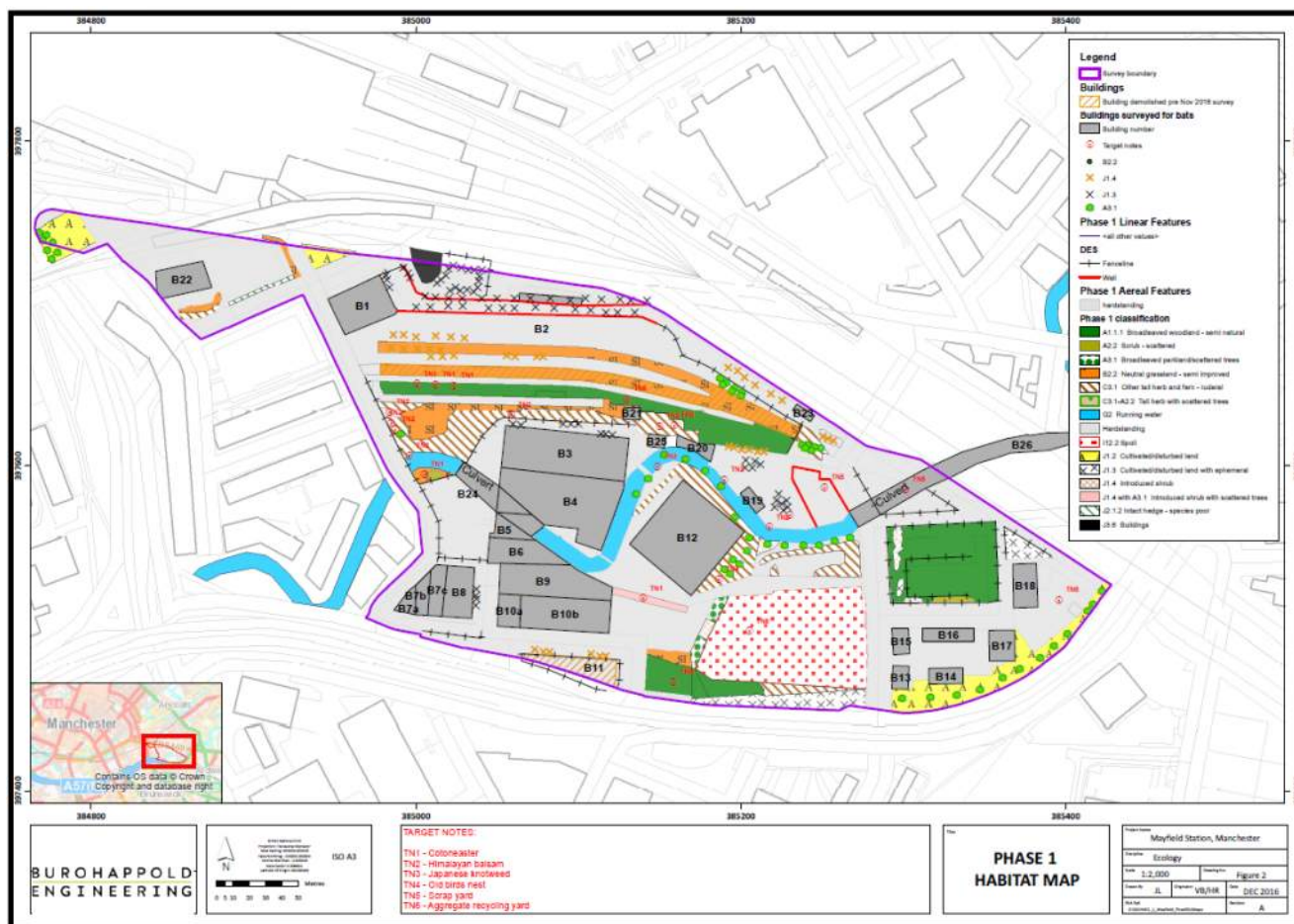


Figure 5-1 Survey site habitat map (BuroHappold, 2017)

¹ BuroHappold (2017), Ecological Assessment Report, November 2017.

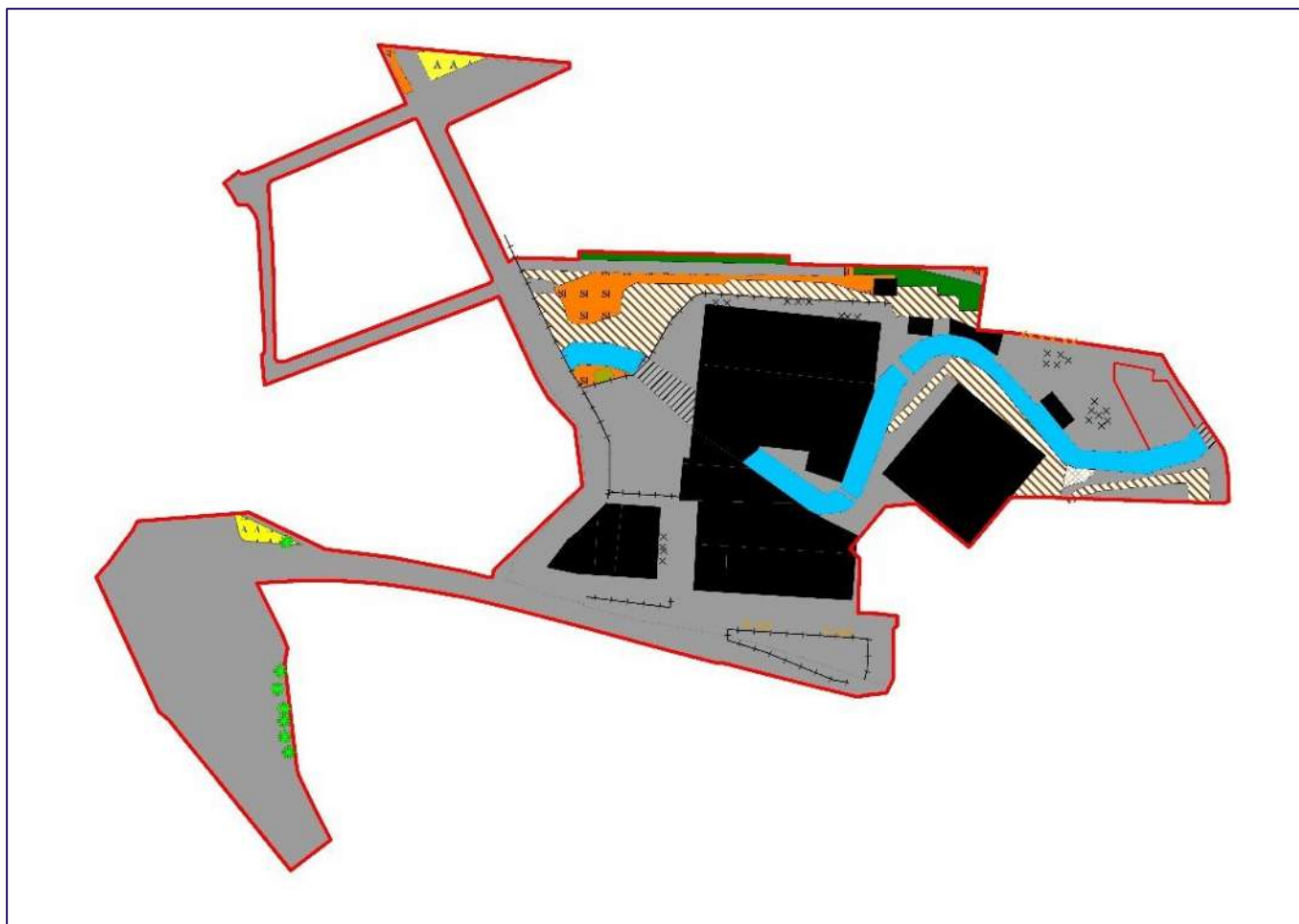


Figure 5-2 Phase 1 habitat map (BuroHappold, 2017)

5.1.3 Post-development habitats

The below table identifies the planting types produced for the post-development Park design. The table provides a 'translation' between the landscape defined planting types to an appropriate UK Habitat Classification typology as defined within the Biodiversity Metric and provides justification for the habitat type chosen as well as the condition score attributed to the habitat based on available landscape information. Post-development habitat areas and distribution across the Park are illustrated in the landscape general arrangement plan, provided in Appendix A.

Table 5-1 Landscape types to biodiversity metric habitat types, condition scores and justification.

Landscape type	Habitat type	Condition score	Justification
PC01 - The Railway Embankment	Grassland – Other neutral grassland	2	Grassland species mix intended to reflect southern facing, relatively dry slopes. The planting mix is largely reflective of neutral grassland, however contains some non-native species within the mix which has resulted in a 'moderate' condition score.
PC02 – Mayfield Lawn	Grassland - Amenity grassland	1	Designed as a turfed area, for use throughout the year by Park users. Low species diversity with grasses dominating. Given a 'low' condition score given its limited value for biodiversity.
PC03 – Gateway Gardens	Urban - Introduced shrubs	2	The area of planting is largely dominated by non-native species, however these do include some native species within the mix and a number of plants known to be of benefit for native pollinators. Therefore, a 'moderate' condition score has been applied.

Landscape type	Habitat type	Condition score	Justification
PC04 – Flower Rich Neutral Grassland (Bed 02 and 48)	Grassland – Other neutral grassland	3	Distinct Bed 02 and Bed 48 of PC04 planting type which contains only native species. Where there may be some scattered shrubs, these appear to be native. Attributed a 'good' condition score.
PC04 – Flower Rich Neutral Grassland (all other beds)	Grassland – Other neutral grassland	2	Some non-natives included within the grassland species mix. Any scattered shrubs within the landscape type also include non-natives within the species mix given. Therefore, given a 'moderate' condition score.
PC05 - River Fringe (Bed 24a)	Grassland – Other neutral grassland	3	River Fringe area is designed to buffer any wetland areas of the river but are not considered likely to be inundated often enough to support a wetland plant community. Bed 24a contains only native species and if shrubs are included in the area these are also of a native mix. Therefore, 'good' condition score has been applied.
PC05 - River Fringe (all other beds)	Grassland – Other neutral grassland	2	River Fringe areas which also include non-native bulbs, perennials and scattered shrubs within the species mix, although a number of these are considered to have benefit for native pollinators. Therefore, 'moderate' condition score has been applied.
PC06 – River Wetland	Wet river mosaic	3	Planting along the edge of the river either on banks or within coir rolls where the plants will be partially submerged for all or part of the year as indicated by detailed modelling of the annual river flows. The emphasis was on native species planting only within the river and frequently flooded areas. Includes sporadic areas which will provide additional habitat features of value for invertebrates. Considered to provide high value habitat within the Park design and given a 'good' condition score.
PC07 – Wildflower Turf	Grassland – Other neutral grassland	2	Some non-natives included within the grassland species mix. Any scattered shrubs within the landscape type also include non-natives within the species mix given. Therefore, given a 'moderate' condition score.
PC08 – The Play Yard	Urban – Introduced shrubs	1.5	The species mix is dominated by non-native large grass species, which are underlaid with primula, providing some value for native invertebrates. Condition score of 'fairly poor' is applied.
PC09 – Southern Woodland Walk (Bed 25 and 31a)	Grassland – Other neutral grassland	3	Area of PC09 planting type as a shade tolerant meadow mix. Non-natives species within the ground flora and shrub mix have been removed due to the planting proximity to the river edge (even though elevated above it). Excludes areas of 31b planting where non-natives still occur. If any shrubs included within the mix, these appear to be native – 'good' condition score.
PC09 – Southern Woodland Walk (all other beds)	Grassland – Other neutral grassland	2	Area of PC09 planting type as a shade tolerant meadow mix which includes non-native species within the ground flora and shrubs – 'moderate' condition score.
PC10 – Rain Garden	Urban – Rain garden	2	Mostly non-native planted urban rain garden, with some species of benefit to native pollinators. Therefore, given a 'moderate' condition score.

Landscape type	Habitat type	Condition score	Justification
PC11 – Southern Walkway Herbaceous	Urban – Introduced shrub	2	Shade tolerant understorey planting but dominated by non-native species. Some have value for pollinators. Therefore, given a 'moderate' condition score.
PC12 – Mayfield Border	Urban – Introduced shrub	2	Dominated by non-native species, but some natives in the mix and some non-natives of benefit to native pollinators. Therefore, given a 'moderate' condition score.
PC13 – Terraced Garden	Urban – Introduced shrub	2	Dominated by non-native species, but some natives in the mix and some non-natives of benefit to native pollinators. Therefore, given a 'moderate' condition score.
Woodland/ tree planting	Urban – street tree	2	All trees proposed across the site have been included under the 'street tree' habitat type as no groupings are considered to warrant a woodland habitat type category. Trees have been assigned a 'moderate' condition score and are split between their proposed size categories in line with how these are defined as small, medium or large within the biodiversity metric.

5.2 Biodiversity net gain results

5.2.1 Wider Mayfield SRF

Table 5-2 summarises the previously calculated biodiversity net gain results based on the previously proposed Park scheme and assumption of post-development habitat types and condition at the outline design stage. It was calculated that the Park alone would deliver just under 25% biodiversity net gain for the whole of the Mayfield SRF, with the assumption that all existing habitats within the SRF would be lost to facilitate the development.

Table 5-2 2019 Ecology Strategy biodiversity net gain results – wider Mayfield SRF

Post-Development Biodiversity Units		Pre-Development Biodiversity Units		Change in Biodiversity Units
16.50	minus	13.25	=	+3.25

Table 5-3 and 5-4 illustrate the updated biodiversity net gain calculations for the SRF. Table 5-3 demonstrates the baseline habitats as recorded in 2017, which is taken as the most recent representative baseline of the habitats on site prior to any actions which supported the facilitation of development on the site. Table 5-4 provides the new post-development habitat values based on the revised areas as a result of the Park redesign, the detailed modelling of the annual river flows to define the wetland habitat areas, and the final planting mixes as proposed by the landscape architect team in conjunction with consultation with Buro Happold project ecologists as well as key statutory consultees including the Environment Agency and Greater Manchester Ecology Unit.

Table 5-3 Pre-development habitat calculations – wider Mayfield SRF

Habitat Type	Area on Site (ha)	Distinctiveness	Condition	Strategic significance	Habitat connectivity		Pre-D Biodiversity Units	Removed	Enhanced	No change
Broadleaved woodland	0.6426	4.0	1.5	1.00	1.0		3.86	3.86		
Scattered scrub	0.0125	4.0	1.5	1.00	1.0		0.08	0.08		
Broadleaved parkland/ scattered trees	0.0220	4.0	1.5	1.00	1.0		0.13	0.13		
Neutral grassland - semi improved	0.4506	4.0	1.5	1.00	1.0		2.70	2.70		
Other tall herb and fern - ruderal	0.4388	4.0	1.5	1.00	1.0		2.63	2.63		
River corridor										
Running water	0.1671	6.0	1.5	1.15	1.15		1.99		1.99	
In-channel vegetation incl. Japanese knotweed and Himalayan balsam	0.1067	2.0	1.0	1.00	1.0		0.21	0.21		
Hardstanding	3.9891	0.0	0.0	0.0	0.0		0.00			
Spoil	0.5490	0.0	0.0	0.0	0.0		0.00			
Amenity grassland (Cultivated/disturbed land)	0.1906	2.0	1.0	1.00	1.0		0.38	0.38		
Cultivated/disturbed land with ephemeral	0.1175	4.0	1.0	1.00	1.0		0.47	0.47		
Introduced shrub	0.0310	2.0	1.0	1.00	1.0		0.06	0.06		
Introduced shrub with scattered trees	0.0195	2.0	1.0	1.00	1.0		0.04	0.04		
Building	1.4581	0.0	0.0	0.0	0.0		0.00			
Baring Street culvert (classified as running water)	0.0709	4.0	1.0	1.15	1.15		0.37		0.37	
Hoyle Street culvert (classified as running water)	0.0607	4.0	1.0	1.15	1.15		0.32			0.32
Total area =	8.3267					Total =	13.25	10.56	2.36	0.32

Table 5-4 Updated post-development habitat calculations – wider Mayfield SRF

Habitat Type	Area on Site (m ²)	Area on Site (ha)	Distinctiveness	Condition	Strategic significance	Habitat connectivity	Temporal risk	Difficulty of creation & restoration	Spatial risk		Post-D Biodiversity Units	Created	Enhanced	No change
River	2380.0	0.2380	6.0	2.0	1.15	1.15	0.84	0.67	1.00		2.12		2.12	
Park - PC06 wetland/river mosaic	1351.0	0.1351	6.0	3.0	1.15	1.15	0.84	0.67	1.00		1.80	1.80		
Park - PC05 river fringe (other neutral grassland)	1527.7	0.1528	4.0	2.0	1.10	1.15	0.70	1.00	1.00		1.08	1.08		
Park - PC05 river fringe (other neutral grassland) - high condition areas	391.3	0.0391	6.0	3.0	1.10	1.15	0.70	1.00	1.00		0.62	0.62		
Park - PC01 railway embankment (other neutral grassland)	1070.0	0.1070	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.66	0.66		
Park - PC04 flower-rich grassland (other neutral grassland)	742.2	0.0742	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.46	0.46		
Park - PC04 flower-rich grassland (other neutral grassland) high condition areas	270.8	0.0271	4.0	3.0	1.1	1.0	0.70	1.00	1.00		0.25	0.25		
Park - PC07 wildflower turf (other neutral grassland)	536.0	0.0536	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.33	0.33		
Park - PC10 raingarden	238.0	0.0238	2.0	2.0	1.1	1.0	0.37	1.00	1.00		0.10	0.10		
Park - PC 03, 08, 11, 12, 13 street planting (introduced shrub)	1877.0	0.1877	2.0	3.0	1.1	1.0	0.37	1.00	1.00		1.20	1.20		
Park - PC09 southern woodland walk (mixed woodland)	18.7	0.0019	4.0	2.0	1.10	1.0	0.70	1.00	1.00		0.01	0.01		
Park - PC09 southern woodland walk (mixed woodland) - high condition areas	1653.3	0.1653	4.0	3.0	1.10	1.0	0.70	1.00	1.00		1.53	1.53		
Park - PC02 lawn (amenity grassland)	2428	0.2428	1.0	2.0	1.00	1.0	0.30	1.00	1.00		0.44	0.44		
Hoyle Street culvert (classified as running water)	607.00	0.0607	4.0	1.0	1.15	1.15	1.00	1.00	1.00		0.32			0.32
Buildings + hardstanding	68176.0	6.8176	0.0	0.0	0.0	0.0	0.00	0.00	0.00		0.00			0.00
Park - Street trees (small)		0.0443	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.07			
Park - Street trees (medium)		0.0377	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.16			
Park - Street trees (large)		0.2035	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.34			
Total area =	83267.0	8.3267								Total =	11.50	8.48	2.12	0.32

The revised proposed landscaping for Mayfield Park, as presented in Table 5-4, will result in a predicted 11.50 Biodiversity Units post-development. The changes to the Park scheme, coupled with revision of the wetland habitat extent following detailed river flow modelling and the production of detailed planting palettes which have supported the definition of the

habitat types, have resulted in a reduction in post-development habitat units delivered by the Park by 5.00 Biodiversity Units. This reduction in Biodiversity Units delivered by the Park has resulted in the Park no longer delivering a net gain in biodiversity for the wider Mayfield SRF by itself, as summarised in Table 5-5. If the only habitat provision within the wider SRF remains as the Park, then the SRF would result in a 13% loss in biodiversity value.

Table 5-5 Updated change in biodiversity units – wider Mayfield SRF

Post-Development Biodiversity Units		Pre-Development Biodiversity Units		Change in Biodiversity Units
11.50	minus	13.25	=	-1.75

Developed plots within Phase 1 and across the wider SRF area will now need to contribute to the biodiversity value of the SRF by providing habitats across the plots. In order to support the SRF to deliver an overall minimum 10% biodiversity net gain, a final value post-development value of 14.575, the plots across the SRF will collectively need to contribute an increase of +3.075 Biodiversity Units.

5.2.2 Phase 1

Table 5-6 summarises the previously calculated biodiversity net gain results based on the previous scheme and assumption of post-development habitat types and condition at outline design stage. It was calculated that the Park alone would deliver a biodiversity net gain of over 175% for Phase 1 alone.

Table 5-6 2019 Ecology Strategy biodiversity net gain results – Phase 1

Post-Development Biodiversity Units		Pre-Development Biodiversity Units		Change in Biodiversity Units
16.31	minus	5.90	=	+10.41

Table 5-7 and 5-8 illustrate the updated biodiversity net gain calculations for Phase 1 in isolation. Table 5-7 demonstrates the baseline habitats as recorded in 2017, which is taken as the most recent representative baseline of the habitats on site prior to any actions which supported the facilitation of development on the site. Table 5-8 provides the new post-development habitat values based on the revised areas as a result of the Park redesign, the detailed modelling of the annual river flows to define the wetland habitat areas, and the final planting mixes as proposed by the landscape architect team in conjunction with consultation with Buro Happold's project ecologists as well as key statutory consultees including the Environment Agency and Greater Manchester Ecology Unit.

Table 5-7 Pre-development habitat calculations – wider Mayfield SRF

Habitat Type	Area on Site (ha)	Distinctive-ness	Condition	Strategic significance	Habitat connectivity		Pre-D Biodiversity Units	Removed	Enhanced	No change
Broadleaved woodland	0.0747	4.0	1.5	1.00	1.0		0.45	0.45		
Scattered scrub	0.0040	4.0	1.5	1.00	1.0		0.02	0.02		
Broadleaved parkland/ scattered trees	0.0028	4.0	1.5	1.00	1.0		0.02			0.02
Neutral grassland - semi improved	0.1190	4.0	1.5	1.00	1.0		0.71	0.71		
Other tall herb and fern - ruderal	0.3333	4.0	1.5	1.00	1.0		2.00	2.00		
River corridor										
Running water	0.1671	6.0	1.5	1.15	1.15		1.99		1.99	
In-channel vegetation incl. Japanese knotweed and Himalayan balsam	0.1067	2.0	1.0	1.00	1.0		0.21	0.21		
Hardstanding	2.9271	0.0	0.0	0.0	0.0		0.00			
Amenity grassland (Cultivated/disturbed land)	0.0390	2.0	1.0	1.00	1.0		0.08			0.08
Introduced shrub	0.0078	2.0	1.0	1.00	1.0		0.02	0.02		
Building	1.2184	0.0	0.0	0.0	0.0		0.00			
Baring Street Culvert (classified as running water)	0.0709	4.0	1.0	1.15	1.15		0.37		0.37	
Hoyle Street culvert, part of (classified as running water)	0.0058	4.0	1.0	1.15	1.15		0.03			0.03
Total area =	5.0766					Total =	5.90	3.42	2.36	0.13

Table 5-8 Updated post-development habitat calculations – Phase 1

Habitat Type	Area on Site (m ²)	Area on Site (ha)	Distinctive-ness	Condition	Strategic significance	Habitat connectivity	Temporal risk	Difficulty of creation & restoration	Spatial risk		Post-D Biodiversity Units	Created	Enhanced	No change
River	2380.0	0.2380	6.0	2.0	1.15	1.15	0.84	0.67	1.00		2.12		2.12	
Park - PC06 wetland/river mosaic	1351.0	0.1351	6.0	3.0	1.15	1.15	0.84	0.67	1.00		1.80	1.80		
Park - PC05 river fringe (other neutral grassland)	1527.7	0.1528	4.0	2.0	1.10	1.15	0.70	1.00	1.00		1.08	1.08		
Park - PC05 river fringe (other neutral grassland) - high condition areas	331.3	0.0331	6.0	3.0	1.10	1.15	0.70	1.00	1.00		0.62	0.62		
Park - PC01 railway embankment (other neutral grassland)	1070.0	0.1070	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.66	0.66		
Park - PC04 flower-rich grassland (other neutral grassland)	742.2	0.0742	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.46	0.46		
Park - PC04 flower-rich grassland (other neutral grassland) - high condition areas	270.8	0.0271	4.0	3.0	1.1	1.0	0.70	1.00	1.00		0.25	0.25		
Park - PC07 wildflower turf (other neutral grassland)	536.0	0.0536	4.0	2.0	1.1	1.0	0.70	1.00	1.00		0.33	0.33		
Park - PC10 raingarden	238.0	0.0238	2.0	2.0	1.1	1.0	0.37	1.00	1.00		0.10	0.10		
Park - PC 03, 08, 11, 12, 13 street planting (introduced shrub)	1877.0	0.1877	2.0	3.0	1.1	1.0	0.37	1.00	1.00		1.20	1.20		
Park - PC09 southern woodland walk (mixed woodland)	18.7	0.0018	4.0	2.0	1.10	1.0	0.70	1.00	1.00		0.01	0.01		
Park - PC09 southern woodland walk (mixed woodland) - high condition areas	1653.3	0.1653	4.0	3.0	1.10	1.0	0.70	1.00	1.00		1.53	1.53		
Park - PC02 lawn (amenity grassland)	2428	0.2428	1.0	2.0	1.00	1.0	0.30	1.00	1.00		0.44	0.44		
Hoyle Street culvert (classified as running water)	57.61	0.0058	4.0	1.0	1.15	1.15	1.00	1.00	1.00		0.03			0.03
Buildings + hardstanding	36271.1	3.6271	0.0	0.0	0.0	0.0	0.00	0.00	0.00		0.00			0.00
Park - Street trees (small)		0.0443	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.07			
Park - Street trees (medium)		0.0977	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.16			
Park - Street trees (large)		0.2035	2.0	2.0	1.1	1.0	0.38	1.00	1.00		0.34			
Total area =	50812.7	5.0813								Total =	11.21	8.48	2.12	0.03

The revised proposed landscaping for Mayfield Park, as presented in Table 5-8, will result in a predicted 11.21 Biodiversity Units post-development. The changes to the Park scheme, coupled with revision of the wetland habitat extent following detailed river flow modelling and the production of detailed planting palettes which have supported the definition of the habitat types, have resulted in a reduction in post-development habitat units delivered by the Park by 5.31 Biodiversity Units. This reduction in Biodiversity Units does still deliver a substantial net gain in biodiversity of approximately 90% net gain, although is noted to be a reduction from the previously proposed 175% gain from the previous scheme design.

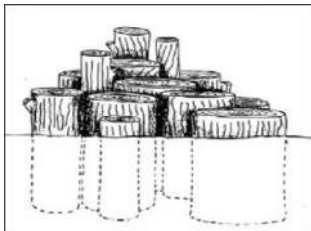
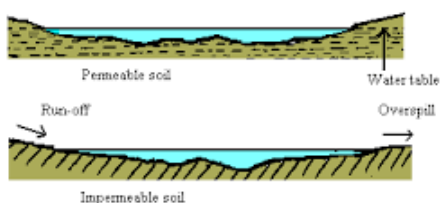
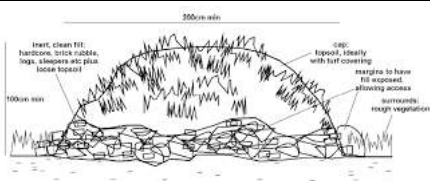
Table 5-9 Updated change in biodiversity units – Phase 1

Post-Development Biodiversity Units		Pre-Development Biodiversity Units		Change in Biodiversity Units
11.21	minus	5.90	=	+5.31

5.3 Designed-in habitat features

In addition to the quantifiable biodiversity net gain as delivered by the habitats on the site, the Park is also delivering a number of enhancement features which will be beneficial for a variety of species, including protected and priority species as well as those included in national and local biodiversity action plans. These features are not captured within the biodiversity net gain calculations but support the Park in delivering locally significant enhancements for ecology. Table 5-10 lists the features that have been designed into the Park as part of the latest detailed design works and are illustrated on the habitat feature plan included in Appendix B. Note that where specific boxes have been provided, alternatives of a similar style, to provide the same function for the target species, may be used if there are supplier issues at the time of purchase during the construction implementation process. In this instance, changes to box types will be checked with the project ecologist.

Table 5-10 Habitat features included within the Park design

Feature type	Number	Example image	Specification
Dead log piles	2		Material: Cords of Wood Wood: Recycled wood free from pests or diseases, not painted or treated with strong preservatives and free from any deleterious material. Other Materials: Free from nails or fixings Length: 700mm to 1500mm Diameter: 200mm to 600mm
Scrape	2		Location: Rivers edge - Shallow edges Depth: Up to 400mm Width: No thinner than 1000mm across. To be formed by gently scraping soil using a toothed bucket to form undulations within the profile of the soil.
Rubble hibernacula	2		Excavate: 1500mm x 2000mm and 600mm depth Backfill - base: Crushed rubble and finer shingle to fill gaps. Backfill - top layer: Build up hole with extra logs, rubble, sand and soil until it reaches 400mm above levels. Top: Cover mound with soil/turf.
Kingfisher Post	2	N/A	Post: Recycled Timber Post. Confirm with Landscape Architect Height: 1000mm minimum above ground after fixing Wood type: To be agreed Wood: Recycled wood free from pests or diseases, not painted or treated with strong preservatives and free from any deleterious material. Other Materials: Free from nails or fixings Fixing: Excavate 500mm, insert post and backfill.

Feature type	Number	Example image	Specification
Kingfisher nest box and tunnel	2		Supplier: NHBS Ltd - Product reference: Schwegler Kingfisher and Sand Martin Nest Tunnel Location: 1.2M above the base of gabion wall. (Confirm location with Landscape Architect). Method of fixing: Imbed tunnel to gabion wall, to manufacturer's recommendation. Size: Nest: 275mm x 275mm x 16mm Dia. Tunnel: 550mm x 140mm x 130mm
Willow tit box	3		Manufacturer: Bandbox, PASTURE HOUSE, WARK, HEXHAM, NORTHUMBERLAND, NE48 3DG Product: Willow Tit/Tree Creeper Box Dimensions: 430 x 60 x 70mm (Height x Width x Depth)
Blue tit box	2		Supplier: NHBS Ltd Product: Vivara Pro Seville 32mm WoodStone Nest Box Dimensions: 310 x 200 x 200mm (Height x Width x Depth)
Wagtail/dipper box	6		Manufacturer: Vivaria Pro Product reference: Wagtail Boxes Location: Minimum 350mm below the top of concrete coping and underneath culvert bridge. Size: 190mm x 255mm x 170mm
General bird/black redstart boxes	2		Supplier: NHBS Ltd Product: Vivara Pro Barcelona WoodStone Open Nest Box Dimensions: 240 x 190 x 175mm (Height x Width x Depth)
Norfolk bat brick	5		Supplier: NHBS Ltd. Product reference: Norfolk Bat Brick Location: Minimum 350mm below the top of concrete coping. Size: 200mm x 100mm x 70mm

6 Outline strategy for developed plots

The purpose of this section is to provide detail on options for the plot design teams in order to further mitigate and compensate for the ecological impacts of the development and to support the park in delivering biodiversity net gain in line with national and local planning policy. As identified in section 5.2.1, the changes to the Park design have resulted in the Park being unable to support a biodiversity net gain for the entire SRF site, with habitats provided by the Park alone falling 3.075 Biodiversity Units short of providing a minimum 10% net gain for the SRF site.

The guidance below covers the recommended habitat interventions that the developed plots could be providing to compensate for habitat loss and to deliver biodiversity net gain for the site in line with best practice. The

recommendations are by no means set in stone and can be adapted to the emerging designs. They provide a general indication of the type and scope of biodiversity measures which should be provided across the site in order to deliver the Natural Capital objective of the Mayfield SRF to 'increase biodiversity and public access to green space' (Mayfield SRF, 2018). The suggested provisions take into account that the developed plots will likely be spatially constrained, with buildings dominating the plot area and there being an associated need for hard landscaping public realm to support the building's intended function and use. Therefore, interventions included within this section are done so in mind of being proportionate and realistic for inclusion within a spatially constrained development plot.

It is advised, given the longevity of the Phase 1 design process and the length of time to complete the wider SRF, that the biodiversity net gain calculations are updated and amended to work within the latest, approved edition of the Biodiversity Metric (3.0, released 2021). This will update the assessment of the river and will be easier to align existing habitat provision within Phase 1 with future SRF development plots which will need to use the more up to date version of the metric in line with local and national planning policies.

6.1 Green/biodiverse/brown roofs

In spatially constrained urban environments, green roofs (which includes biodiverse {wildflower} and brown roofs) can be used to attenuate roof run-off, reduce urban heat island effect, insulate buildings, enhance amenity value and provide habitat for wildlife. There are a range of different green roof types available, and an evaluation of the different roof types is presented in Table 6-1. Table 6-2, adapted from *Living Roofs and Walls Technical Report: supporting London Plan policy* (GLA, 2008), summarises the broader potential environmental benefits for the main green roof types.

As far as biodiversity improvements go, biodiverse green roofs provide the greatest benefit. They can provide food, cover and overwintering habitats for a range of invertebrates which can in turn feed a variety of local bird and bat species. They can also provide seeds and fruits for birds and can contribute to delivering a new ecologically valuable habitat appropriate to the local area and a biodiversity priority habitat.

For the Mayfield site, because of the presence of black redstart within Manchester city centre, this brownfield specialist would particularly benefit from a mix of biodiverse and brown roofs which could be provided as a mix within a single plot or across the different plots in the SRF.

In terms of contributing to biodiversity net gain, biodiverse (extensive) green roofs provide the most Biodiversity Units in comparison to intensive green roofs and brown roofs provide the least. Maximising biodiverse green roofs will help to support the biodiversity net gain assessment. It is also worth noting that a number of companies that specialise in providing green roof mediums and planting types have developed biodiverse mixes which are designed to thrive alongside PV installation. Whilst to support the vegetative growth beneath, PVs are required to be spaced further apart than they would without the green roof component, there is the possibility of combining the two which reduce roof-space conflict with other sustainability objectives.

Table 6-1 Green and blue roof types

Feature (Fig no.)	Description	Typical substrate depth	Typical roof loadings (dead load)	Water retention annual average (%) / Coefficient ²	Vegetation options / plant species diversity	Contributes to biodiversity?	Accessible?
Extensive green roof (Fig 6-1)	Lightweight with minimal maintenance and lower water requirements than intensive green roofs	Mat based: 20-60mm depth Substrate-based: 60-100mm depth	50kg/m ² (sedum mat/blanket) - 110kg/m ² (substrate)	40 - 50% / 0.6 - 0.5	Sedum moss / low plant species diversity	Not considered biodiverse, but do provide some invertebrate forage in early summer. Can be combined with solar PV and blue roof	Generally maintenance only
Extensive biodiverse roof (Fig 6-2)	Planted in shallow, low nutrient substrates to increase local	80mm-150mm – ideal if depth is varied	100 – 200 kg/m ²	55 - 60% / 0.5 - 0.45	Sedum moss wildflowers grasses	Yes – biodiverse. Tend to have better water holding capacity than brown roofs.	Generally maintenance only

² <https://livingroofs.org/storm-water-run-off/> Table is abridged from the FLL – the German Guidelines for Green Roofs.

Feature (Fig no.)	Description	Typical substrate depth	Typical roof loadings (dead load)	Water retention annual average (%) / Coefficient ²	Vegetation options / plant species diversity	Contributes to biodiversity?	Accessible?
	plant diversity and provide wildlife habitat, minimal maintenance	across the roof as it can support a greater diversity of plants and therefore biodiversity			sedges / high species diversity	Can be combined with solar PV and blue roof	
Brown roof (Fig. 6-3)	Not planted – substrate is selected to allow native plant species to colonise the roof over time. Designed to mimic brownfield habitats for species such as black redstart	80mm-150mm	100 – 200 kg/m ²	-	Not planted -	Can be difficult to get a diversity of vegetation to establish due to roof top conditions (heat/wind/drought stress). Also of limited water holding capacity due to substrate (high proportion of recycled brick/aggregate /cement). Can be combined with solar PV and blue roof	Generally maintenance only
Semi-intensive / intensive green roof (roof gardens/ terraces and podium decks) (Fig 6-4)	Can support a wider range of plants ,require regular maintenance and irrigation	150mm - >500mm depth	150-500 kg/m ²	60 – >90% / 0.4 - 0.1	Trees, shrubs, lawns, perennial beds, climbers / low – high species diversity dependent on selection	Potentially yes if a proportion of the plants are selected for biodiversity/wildlife value. Can be combined with blue roof	Yes
Blue roof	Attenuates collected water across a roof at a shallow depth	<100mm	Maximum additional load of 1.0kN/m ²	-	-	Can be combined with any of the above green roof types and solar PV	Yes



Figure 6—1 Extensive Sedum green roof above cycle store/ garages (Nyborg, Denmark)



Figure 6—2 Jakob Burkhardt biodiverse roof (Basel, Switzerland)



Figure 6—3 Typical brown roof – self-seeded brownfield habitat and mixed recycled substrate



Figure 6—4 Intensive green roof (roof garden)(London)

Table 6-2 Matrix of roof type vs. potential environmental benefits

Roof type	Potential benefit					
	Climate change	Building energy balance	Urban Heat Island Effect (UHIE)	SUDS	Biodiversity	Amenity
Extensive - mat based <40mm e.g. Sedum	✓	✓	✓	✓	✓	✓ (visual)
Extensive – substrate based >75mm e.g. biodiverse	✓✓	✓✓	✓✓	✓✓	✓✓✓	✓✓ (visual)
Intensive e.g. roof garden, podium deck	✓✓	✓✓	✓✓✓	✓✓✓	✓	✓✓✓

6.2 Living walls

As with green/biodiverse/brown roofs, living walls provide a range of benefits and can reduce urban heat island effect, regulate building temperatures, protect building façades, improve air quality, reduce noise and contribute to biodiversity.

Living walls tend to be grouped into two categories: modular and climbing on trellis/framework/cables (Figures 6-5 – 6-8). The main difference is that with modular systems the growing medium which provides the plants with their nutrients and water sits in the modules of the walls while in the climbing system plants are rooted at the base of the structures.

At Mayfield, they can easily be incorporated into public realm and provide both biodiversity and amenity/visual benefit. Utilisation of a range of native and wildlife-beneficial climbing flowering species and evergreen species such as ivy and ferns would maximise their ecological/biodiversity benefit. Stone and brick walls also offer opportunities to incorporate small creeping plants and drought-tolerant plants such as succulents with minimal root systems which will easily fit into planting pockets.

In terms of biodiversity net gain, climbing, ground-based green walls and modular, façade bound green walls can score the same habitat value. Typically climbing systems have better long-term survival due to the ground-based nature of the planting giving better access to food and water for the plant. However, it can be more challenging to include a variety of species with value for biodiversity. Alternatively, modular walls can provide a wide range of native species as well as non-native species which are known to be beneficial for native wildlife species.

Table 6-3 Living wall types

Feature (Fig no.)	Description	Benefits	Disadvantages	Contributes to biodiversity?
Climbing or hanging green walls (Figs 6-5 and 6-8)	Supported by structure on a wall e.g. trellis or cables Supported by a self-standing structure away from a wall e.g. framework Plants hang from a height	Can cover large areas. Less expensive to install and maintain than modular systems Maintenance at planter level May not require irrigation	More difficult to provide the diversity of planting achievable by modular systems. Slower to establish than modular systems	Yes – if a proportion of the plants are selected for biodiversity/wildlife value.
Modular green walls (Figs 6-6 and 6-7)	Plants grow in pockets, pots, modules in panels, walls or box planters	Instant impact. Modular system can be built to any size/shape. Planting can be tailored to provide specific benefit for certain species or groups e.g. pollinators or bats. Can be integrated with rainwater harvesting system for irrigation.	Expensive Requires irrigation On-going long-term maintenance required, access can be challenging	Yes – if a proportion of the plants are selected for biodiversity/wildlife value.



Figure 6—5 Cable green wall (MFO Park, Zurich)



Figure 6—6 Modular green wall (Paddington, London)



Figure 6—7 Modular green walls (Lord's Cricket Ground, London)



Figure 6—8 Box planters at Paddington

6.3 Pollinator planting

For this development, incorporation of plant species in the soft landscaping which are native and/or of known benefit for pollinators would contribute to meeting the targets of the National Pollinator Strategy as well as contribute to delivering biodiversity net gain. Potential opportunities include:

- Trees and shrubs underplanted with native spring bulbs, flowering perennials and ferns to provide ground cover and foraging habitat.
- Beds, verges, rain gardens and/or swales (or other SUDS features) planted with a variety of flowering perennials, grasses and shrubs to provide both visual amenity as well as pollen and nectar throughout the growing season (including early spring – late autumn/winter) to help extend food availability throughout the season (see Figs 6-9 and 6-10).
- Living walls planted with climbing flowering species, creeping plants, succulents and wall ferns to create vertical living habitat and cover as well as provide pollen and nectar.
- Biodiverse green roofs planted with a diversity of flowering plants as well as mosses, grasses, sedges to provide overwintering habitat and cover.

The positive benefit of pollinator planting is increased when undertaken in conjunction with provision of habitat features (see Table 6-8) to support resting/hibernating invertebrates.

Typically the use of native planting within planting beds around the developed plots will support the application of a semi-natural habitat type within the Biodiversity Metric calculations, although at a poorer condition score to reflect its urban location and planting within a bed/planter environment. Semi-natural habitats are typically attributed with a higher distinctiveness score within the metric to support their inclusion within developments aiming to achieve a net gain in biodiversity.

Non-native planting is attributed with a lower distinctiveness score within the Biodiversity Metric and will typically only achieve a Poor condition score which restricts the amount of Biodiversity Units it can deliver, despite the fact that it may contain plant species which are known to benefit native pollinators.

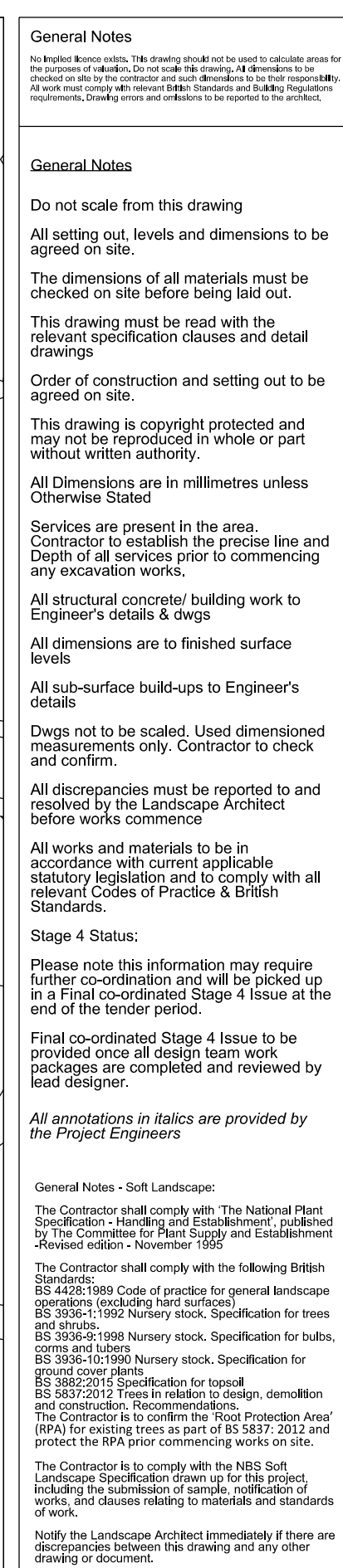


Figure 6—9 Wildflower verge (Olympic Park, Stratford)



Figure 6—10 Vegetated conveyancing swale planted with native, pollen-rich species (Olympic Park, Stratford)

7 Appendix A – Landscape General Arrangement Plan



T00	26.02.21	Stage 4 DRAFT	SE
Rev	Date	Reason for issue	CA

sew Egret West

Client
Mayfield Partnership

Mayfield Park

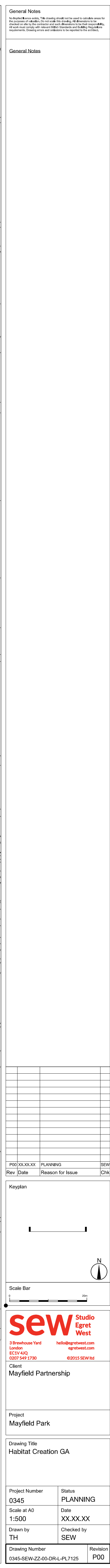
Soft Landscape Planting Types G

Project Number	Status
0345	TENDER

1:500	26.02.21
Drawn by TUL	Checked by SEM

Drawing Number	Revision
0345-SEW-ZZ-00-DR-L-007123	T00

8 Appendix B – Habitat Feature Location Plan



P00	XXXXXXXX	PLANNING	SEW
Rev	Date	Reason for issue	Chk



Project
Mayfield Park

Project Number	Status
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0345	PLANNING
Scale at A0 1:500	Date XX.XX.XX
Drawn by TH	Checked by SEW

Drawing Number	Revision
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