# Biodiversity Net Gain Assessment

## Primrose Nature Reserve Proposed Footpath

Clitheroe, Lancashire

April 2026 Rev C

**Prepared for: Primrose Community Nature Trust**

**Report prepared by: Verity Webster BSc (Hons) MSc CEcol CMIEEM**

**This document is to be read in conjunction with:**

- **The Statutory Biodiversity Metric Calculation Tool– Primrose NR Rev C**
- **The Habitat Condition Assessment Sheets – Primrose NR**
- **Mearley Brook Baseline – Enhancement RCA excel**

## EXECUTIVE SUMMARY

- On 26th February 2026 a site visit to inform the Biodiversity Net Gain Assessment was undertaken land in Primrose Nature Reserve and the adjacent St James' Church of England Primary School.

- The survey site comprises a stretch of land on the northwest side of Mealey Brook as it passes through Primrose Nature Reserve and into school grounds. The footprint of the proposed footpath encompasses a small section of artificially unvegetated unsealed surface and modified grassland within the school grounds, passes through a wall and then runs through an open area of dense bramble scrub and a small portion of lowland mixed deciduous woodland to meet the existing footpath.

**Biodiversity Loss**

- The creation of the footpath will result in the loss of 0.0058ha of bramble scrub and 0.006ha of artificial unvegetated, unsealed surface. 4 small rural trees will be removed.

- Riparian encroachment will be increased from no encroachment to minor encroachment in along a short stretch (15m) of Mearley Brook.

**On-site enhancement**

- 90m$^2$ of bramble scrub will be enhanced to created mixed scrub of moderate condition.

- A longer stretch (113m) of Mearley Brook will be enhanced as a result of the project, with an objective to improve the condition from fairly poor to moderate.

**Off-site enhancement**

- To allow for sufficient enhancement an off-site area of 0.0345ha within Primrose Nature Reserve has been identified for tree planting. This is within the riparian zone of the side channel of Mearley Brook. 19 small native trees will be planted.

**Biodiversity Gain**

- There will be a 10.16% increase in Habitat Units and 12.37% increase in Watercourse Units.

# 1. Introduction

## 1.1 Application Site

1.1.1 This report details a Biodiversity Net Gain Assessment of land within Primrose Nature Reserve, Clitheroe. Ordnance Survey grid reference (centre of site): SD74094123.

1.1.2 Primrose Community Nature Trust commissioned Verity Webster Ltd to undertake a Biodiversity Net Gain Assessment in order to inform the proposals for the site.

## 1.2 Objectives

1.2.1 The objectives of the Biodiversity Net Gain Assessment are to determine:

- Potential for enhancement or compensation (offsetting) on the site for protected species, habitats of conservation interest and overall biodiversity with the aim of achieving 10% net gain in biodiversity.

## 1.3 Proposals

1.3.1 The proposals comprise the construction of a footpath running from St James' Church of England Primary School to an existing footpath within Primrose Nature Reserve.

## 1.4 Ecologist

1.4.1 The Ecological Assessment was undertaken by Verity Webster. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management.

1.4.2 Verity has worked as an ecological consultant since 2007. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary.

## 1.5 Report Limitations

1.5.1 This document includes recommendations for measures to achieve BNG. These recommendations do not comprise a landscape design or planting prescriptions as provided by a Landscape Architect and the ecologist has no Design Liability associated with these recommendations.

# 2. Site Location and Description

## 2.1 Site Location

2.1.1 The On-Site Area is located within Primrose Nature Reserve, which is situated in the centre of Clitheroe, with the northern portion comprising a small area of St James' Church of England Primary School.

2.1.2 The Off-Site Area is also located within the nature reserve, immediately to the southeast of the On-Site Area, encompassing stretch of bank adjacent to an artificial side-channel of Mearley Brook.

2.1.3 Mearley Brook runs north to south through the reserve, which is predominantly semi-natural and wet woodland, stilling in lodge lake to the south before running down a weir and out into the countryside to the south of the town.

2.1.4 The nature reserve is surrounded by residential housing to the east and west. Woone Lane runs along the northwest boundary. St James' Church of England Primary School lies at the northern end. Mearley Brook runs south through the school grounds to the north of the reserve. See Figures 1, 2 and 3.

## 2.2 Site Description

2.2.1 The On-Site Area comprises a stretch of land on the northwest side of Mealey Brook as it passes through Primrose Nature Reserve. From north to south, the survey site encompasses a small section of artificially unvegetated unsealed surface and modified grassland within the school grounds, passes through a wall and then runs through an open area of dense bramble scrub and a small portion of lowland mixed deciduous woodland to meet the existing footpath. The footpath length is approximately 95m.

2.2.2 The Off-Site Area comprises a stretch of approx. 5m wide riparian habitat on the southeast bank of the artificial side channel of Mearley Brook. The riparian habitat comprises tall forb.

2.2.3 For the full habitat description, refer to Section 5.

**Figure 1: Ordnance survey map showing the location of the proposed development site.**

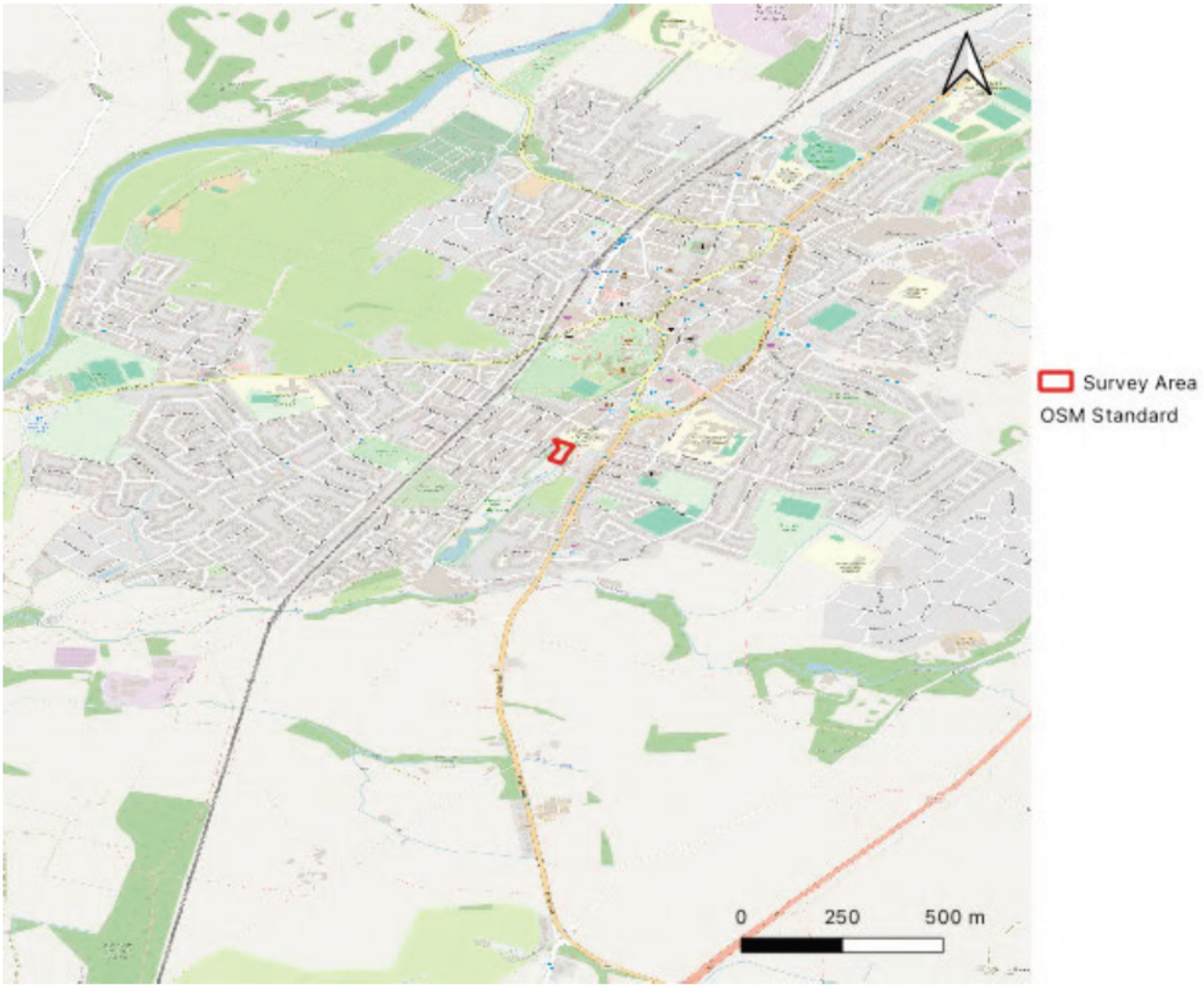
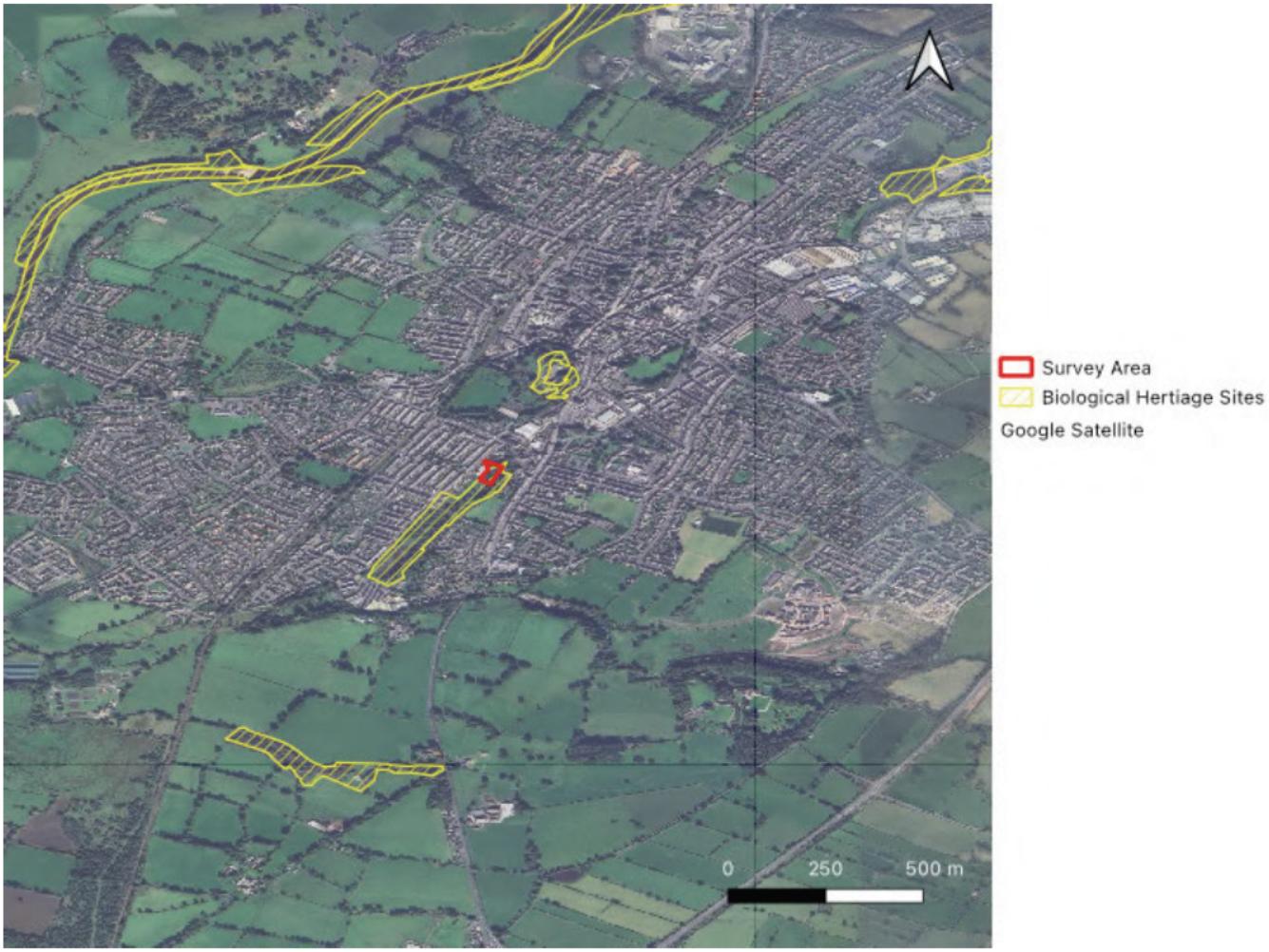


**Figure 2: Aerial image showing the proposed development site and immediate surroundings**



# 3. Legislation

## 3.1 Planning Policy and Legislation

3.1.1 In England, biodiversity net gain is required under a statutory framework introduced by Schedule 7A of the Town and Country Planning Act 1990 (inserted by the Environment Act 2021). This is referred to as biodiversity net gain in Planning Practice Guidance to distinguish it from other or more general biodiversity gains.

3.1.2 Under the statutory framework for biodiversity net gain, every grant of planning permission is deemed to have been granted subject to a general biodiversity gain condition to secure the biodiversity gain objective. This objective is to deliver at least a 10% increase in relation to the pre-development biodiversity value of the development granted permission. This increase can be achieved through onsite biodiversity gains, registered offsite biodiversity gains or statutory biodiversity credits (Gov.Uk Biodiversity Net Gain, 2023).

3.1.3 Under the NERC Act 2006, planning authorities are obliged to make sure that they have all the information on the presence of protected species on site before they make a decision on the planning permission.

3.1.4 The National Planning Policy Framework (NPPF, 2021) encourages Local Planning Authorities to conserve and enhance biodiversity.

Chapter 15, Para 180 of NPPF states: *''The planning system should contribute to and enhance the natural and local environment by:*

**a)** ***protecting and enhancing valued landscapes, sites of biodiversity*** *or geological value and soils....*

**d)** ***minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures***".

Para 181 states: "*Plans should: distinguish between the hierarchy of international, national and locally designated sites; allocate land with the least environmental or amenity value, where consistent with other policies in this Framework; take a strategic approach to maintaining and enhancing networks of habitats and green infrastructure; and plan for the enhancement of natural capital at a catchment or landscape scale across local authority boundaries.''*

Para 185 identifies that plans should do the following to protect and enhance biodiversity and geodiversity:

**a)** "***Identify, map and safeguard components of local wildlife-rich habitats and wider ecological networks, including the hierarchy of international, national and locally designated sites of importance for biodiversity; wildlife corridors and stepping stones that connect them; and areas identified by national and local partnerships for habitat management, enhancement, restoration or creation; and***

**b)** ***Promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and peruse opportunities for securing measurable net gains for biodiversity.***"

Para 186 states that "*when determining planning applications, local authorities should apply the following principles:*

**a)** ***if significant harm to biodiversity from a development cannot be avoided...,adequately mitigated, or, as a last resort compensated for, then planning permission should be refused***''

3.1.5 The local planning authority has a responsibility, therefore, to obtain all information regarding the potential for protected species on a site prior to making a decision about a proposal.

# 4. Methodology

## 4.1 Site Survey

4.1.1 Site visits were undertaken on 26th February and 17th April 2026 to inform the Biodiversity Net Gain Metric and Assessment. Habitats on site were assessed and described in accordance with UK Habitat Classification (UK Hab Ltd, 2023) and a list of conspicuous species recorded. Given that the survey was undertaken in late-February, botanical data from the Primrose Community Nature Trust including records of plant species recorded on site from 1992, 1995, 2003, 2004, 2006, 2008, 2011, 2012 and 2021, and the citation for the Biological Heritage Site, was also used to inform the assessment. The condition of the habitats was determined using the condition sheets provided for the Statutory Metric (DEFRA, 2023).

4.1.2 The Ecological Assessment was undertaken by Verity Webster BSc MSC CEcol MCIEEM. Verity is a Chartered Ecologist and a full member of the Chartered Institute of Ecology and Environmental Management. Verity has a Class 2 bat licence, Class 1 great crested newt licence and Botanical Skills FISC Level 4, suitable for NVC survey.

4.1.3 Verity has worked as an ecological consultant for over 19 years. She has undertaken Ecological Assessments and protected species surveys for a large variety of projects and schemes, producing the required impact assessment and subsequent mitigation schemes and method statements when necessary.

## 4.2 River Condition Assessment

4.2.1 To inform the watercourse tab of the Statutory Metric, a River Condition Assessment (RCA) of Mearley Brook within the survey area was undertaken using the Modular River Physical (MoRPh) survey (Gurnell et al, 2022). Cartographer software was used to do a River Type Assessment and produce a preliminary condition score.

### Mearley Brook

4.2.2 A MoRPh 5 survey was undertaken by Verity Webster on 26th February 2026 to inform the condition score for the beck.

## 4.3 Biodiversity Net Gain Assessment

4.3.1 Biodiversity Offsetting was developed by Defra. The pilots of the study were first published in 2012.

4.3.2 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units.

4.3.3 *The Biodiversity Offsetting Pilots: Guidance for Developers* (Defra, 2012) details the original metric for calculating biodiversity loss or gain as a result of development proposal.

4.3.4 *The Statutory Biodiversity Metric* (DEFRA, 2023) and the associated guidance was used to assess the habitat condition and calculate potential change in biodiversity within the survey site.

4.3.5 To determine strategic significance of the habitats at baseline and post-development, the relevant

documentation was considered including Local and Neighbourhood Plans, Priority Habitats, Local Biodiversity Action Plans and Local Ecological Networks. When available the relevant Local Nature Recovery Strategy will be utilised for this purpose.

4.3.6 The Mitigation. Hierarchy and the Biodiversity Net Hierarchy and was used to inform recommendations about habitat retention, loss, enhancement and creation as per the Biodiversity Net Gain: Good Practice principles for development (CIRIA C776a, 2019) and the Biodiversity Net Gain Principles (The Statutory Metric User Guide, 2024).

4.3.7 The calculation of change in biodiversity units has been based upon the Long Preston Brook Re-meandering proposals provided by Ribble Rivers Trust Ltd.

### Biodiversity Net Gain Principles (Table 4, p. 19, The Statutory Metric User Guide, 2024)

Principle 1 – The metric assessment should be completed by a competent person.

Principle 2 – The use of this biodiversity metric does not override existing biodiversity protections, statutory obligations, policy requirements, ecological mitigation hierarchy or any other requirements. This includes consenting or licencing processes, for example woodlands.

Principle 3 – This biodiversity metric should be used in accordance with established good practice guidance and professional codes.

Principle 4 – This biodiversity metric is not a complex or comprehensive ecological model and is not a substitute for expert ecological advice.

Principle 5 – Biodiversity units are a proxy for biodiversity and should be treated as relative values.

Principle 6 – This biodiversity metric is designed to inform decisions in conjunction with locally relevant evidence, expert input, or guidance.

Principle 7 – Habitat interventions need to be realistic and deliverable within a relevant project timeframe.

Principle 8 – Created and enhanced habitats should be, where practical and reasonable, local to any impact and deliver strategically important outcomes for nature conservation.

Principle 9 – This biodiversity metric does not enforce a minimum habitat size ration for compensation of losses. Proposals should aim to:

- Maintain habitat extent – supporting more, bigger, better and more joined up ecological networks.
- Ensure that proposed or retained habitat parcels are of sufficient size for ecological function.

### 4.4 Limitations

4.4.1 The survey work was undertaken in late-February and mid-April 2026. Many higher plants were visible, but some species are more conspicuous or only present at some times of the year, and some species may have been missed. The species list constructed is not comprehensive.

4.4.2 Data from previous surveys at Primrose Nature Reserve/Primrose Lodge Biological Heritage Site was also used to inform the data and is considered sufficient to inform the Statutory Site Metric.

# 5. Biodiversity Net Gain Assessment

## 5.1 Baseline condition and potential impacts on Biodiversity

### Offsetting and the Biodiversity Calculator

5.1.1 The baseline condition of the habitat and the predicted change as a result of the proposals has been assessed with the use of the Biodiversity Offset principals.

5.1.2 Biodiversity offsetting principal: What is it?

> "Using the biodiversity offsetting approach means than an offset provider delivers quantifiable amount of biodiversity benefit to offset the loss of the biodiversity resulting from the development. The losses and gains are measured in the same way, even if the habitats concerned are different. In the biodiversity offsetting pilot, the measurement is done in **'biodiversity units'**, which are the product of the **size of an area**, **the distinctiveness** and **the condition** of the habitat it comprises. The assessment of biodiversity units lost and gained can be calculated" (Defra, 2012).

5.1.3 The Biodiversity Calculator is a system created by Defra to quantify change in biodiversity of a site in biodiversity units. The current calculator is known as Statutory Biodiversity Metric (Gov.UK Statutory Biodiversity Metric Tool, 2023).

5.1.4 This quantitative assessment will be considered in relation to the other qualitative ecological functions of the site in order to assess the impact (i.e. functionality for protected species), but is a useful tool to show predicted or potential loss of habitat, change in condition and enhancement (net gain).

## Habitats at Baseline

5.1.5 The On-Site Area supports artificial unvegetated, unsealed surface and a small area of modified grassland within the school grounds. There are rural trees located along the boundary wall. Across the wall to the south there is lowland mixed deciduous woodland that transitions into wet woodland on the banks of Mearley Brook. To the southwest there is an extensive area of bramble scrub with some tall forb.

5.1.6 The Off-Site Area encompasses tall forb habitat. Refer to Figure 3.

5.1.7 The UK Habitat classifications are as follows:

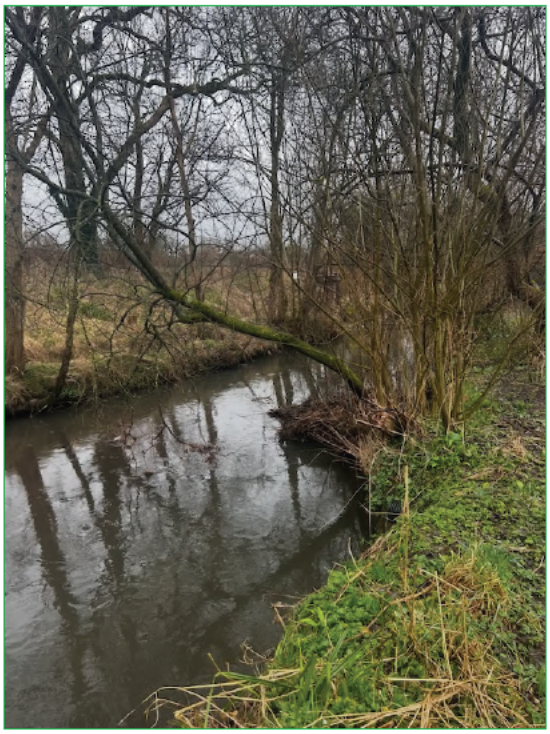
- **w1f7 Other lowland mixed deciduous woodland**
- **w1d 524 Wet woodland; ; non-native invasive species**
- **h3d 16 Bramble scrub with tall forb**
- **g4 108 Modified grassland; regularly mown**
- **r2b 47 Other rivers and streams; natural**
- **g4 200 Rural trees**
- **u1f Artificial unvegetated, unsealed surface**
- **u1b6 Developed land; sealed surface**
- **u1e 853 Built liner feature; mortared wall**
- **g4 16 Tall forb**

## On-Site Habitat Descriptions

**w1f7 Other lowland mixed deciduous woodland – Priority Habitat**

5.1.8 The woodland within the survey are to the north of Primrose Lodge BHS supports ash (*Fraxinus excelsior*), sycamore (*Acer psudoplatanus*) and alder (*Alnus glutinosa*) with and understorey of hazel (*Corylus avellana*), blackthorn (*Prunus spinosa*) and hawthorn (*Crataegus monogyna*).

5.1.9 The ground flora comprises emergent common bistort (*Persicaria bistorta*), ransoms (*Allium ursinum*), cow parsley (*Anthriscus sylvestris*), herb Robert (*Geranium robertianum*), common nettle (*Urtica dioica*), lesser celandine (*Ranunculus ficaria*), in areas forming dense ground cover, dandelion (Taraxacum agg.), woodruff (Galium odoratum) and wood avens (*Geum urbanum*) with occasional lords and ladies (*Arum maculatum*). The mosses *Eurhynchim praelongum* and *Hypnum cuppressiforme* agg. Are present on the woodland floor. Grasses comprise Yorkshire fog (*Holcus lanatus*) and cock's-foot grass (*Dactylus glomerata*), which are more abundant at the woodland edge and where there are glades.

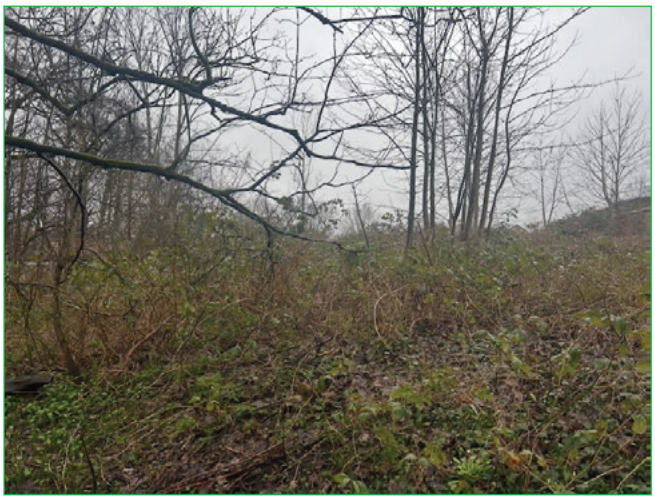


Wet woodland and other lowland mixed deciduous woodland along Mearley Brook

5.1.10 Although the woodland supports sycamore, a species considered non-native within the Biodiversity Net Gain guidance, the woodland has good structure and variety in the species composition of the canopy layer and ground flora, which suggests it is classified as lowland broadleaved woodland, a priority habitat.

5.1.11 The strip along the brook bank can be classified as w1a wet woodland to ensure the transition between the mixed deciduous woodland and the brook.

5.1.12 This habitat supports alder transition with pendulous sedge, brook bank bryophytes and more permanently mesic ground. Pendulous sedge (*Carex pendula*) is conspicuous in large tufts along the banks of the brook. Shining cranesbill (*Geranium lucidum*) was also present at the water edge near the weir. The moss *Thamnobryum alopecurum* forms tufts on the banks of the brook. At the time of survey seedlings of the non-native invasive species Himalayan balsam (*Impatiens grandulifera*) were starting to emerge.



Bramble scrub

5.1.13 There is a small stand of reed canary (*Phalaris arundinacea*) grass on the edge of the bank where the ground is wetter (w1d 16).

**h3d Bramble scrub**

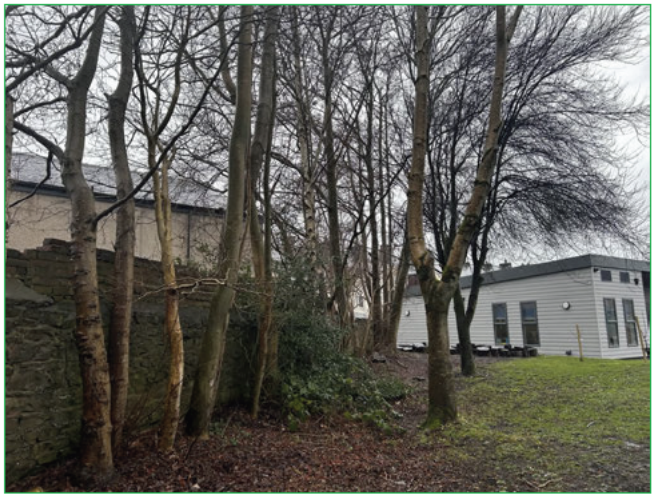
5.1.14 The western boundary of the site is composed of dense bramble (*Rubus fruticosus* agg.) scrub.

**g4 108 Modified grassland; regularly mown**

5.1.15 This stand of grassland is present in the school grounds. It is composed of sparse rye gras (*Lolium perenne*) and cock's-foot grass with dandelion (*Taraxacum* agg.), dock (*Rumex* sp.) and daisy (*Bellis perennis*).

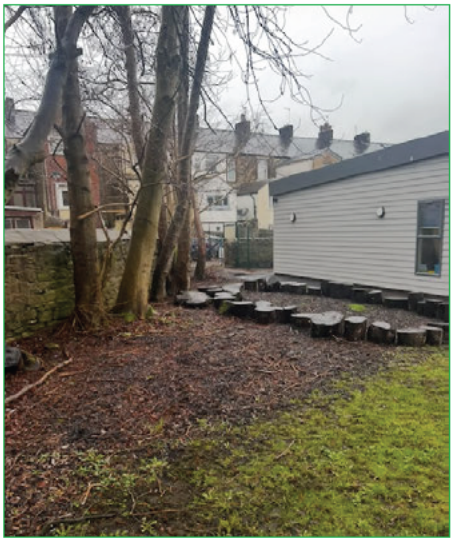
**g4 200 Rural trees**

5.1.16 Individual rural trees are present in the school grounds along the east and south school boundary. These comprise ash along the western boundary and hazel along the southern boundary. There is a single field maple (*Acer campestre*) in the corner. All these trees are immature or semi-mature.



Small trees in the school grounds; also showing artificial unvegetated, unsealed surface, mown modified grassland and the mortared stone wall.

5.1.17 With reference to the tree survey (Lakeland Tree Consultancy, 31 Jan 26), trees to be removed comprise 5 small hazel and 4 small ash lost in G1 and G2. These are considered poor condition due to immaturity, proximity to wall and oversailing unvegetated ground. Ash trees T1 (medium), T2, T3, T4 (Small) considered poor condition due to dieback, proximity to wall and oversailing unvegetated ground will also be removed. Immature trees in G4 are below the 7.5cm DBH threshold to be considered as individual trees.



Rural trees and artificial unvegetated, unsealed surface in the school grounds.

**u1f Artificial unvegetated; unsealed surface**

5.1.18 This comprises bare ground and woodchip present in the school grounds**.**

**u1b6 Developed land; sealed surface**

5.1.19 This comprises the existing footpath and bridge.

**u1e 853 Built linear feature; mortared wall**

5.1.20 The wall is a high stone wall. Maidenhair spleenwort (*Aspenium trichomanes*) is present in the cracks and crevices.

**r2b 47 Other rivers and streams**; **natural**

5.1.21 Mearley Brook is classified as a result of the MoRPh survey as River Type F, straight, sinuous with cobble and gravel. However, high up the reach where it descends form the Pendle slopes, it is likely to resemble meandering Type G, and with high energy and some cascades over boulders. The stretch

through Clitheroe has been modified with bank reinforcement and culverted sections.

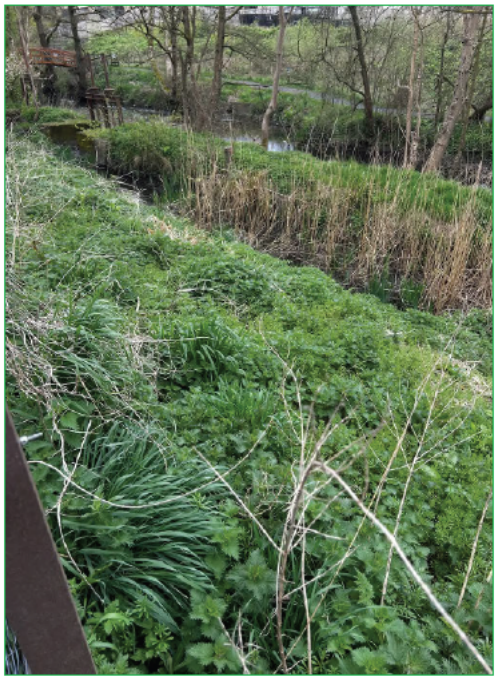
5.1.22 The banks along the stretch of the brook in the reserve are generally vertical and eroding with some small bare sidebars. The banks support little vegetation, with some typical bryophytes; *Thanobryum alopecurum* and *Conocephalum conicum*. Pendulous sedge is dense in some areas.

5.1.23 There has been historic modification of the brook bed with installation of weirs and a side channel to the south.

## Off-Site Habitat Descriptions

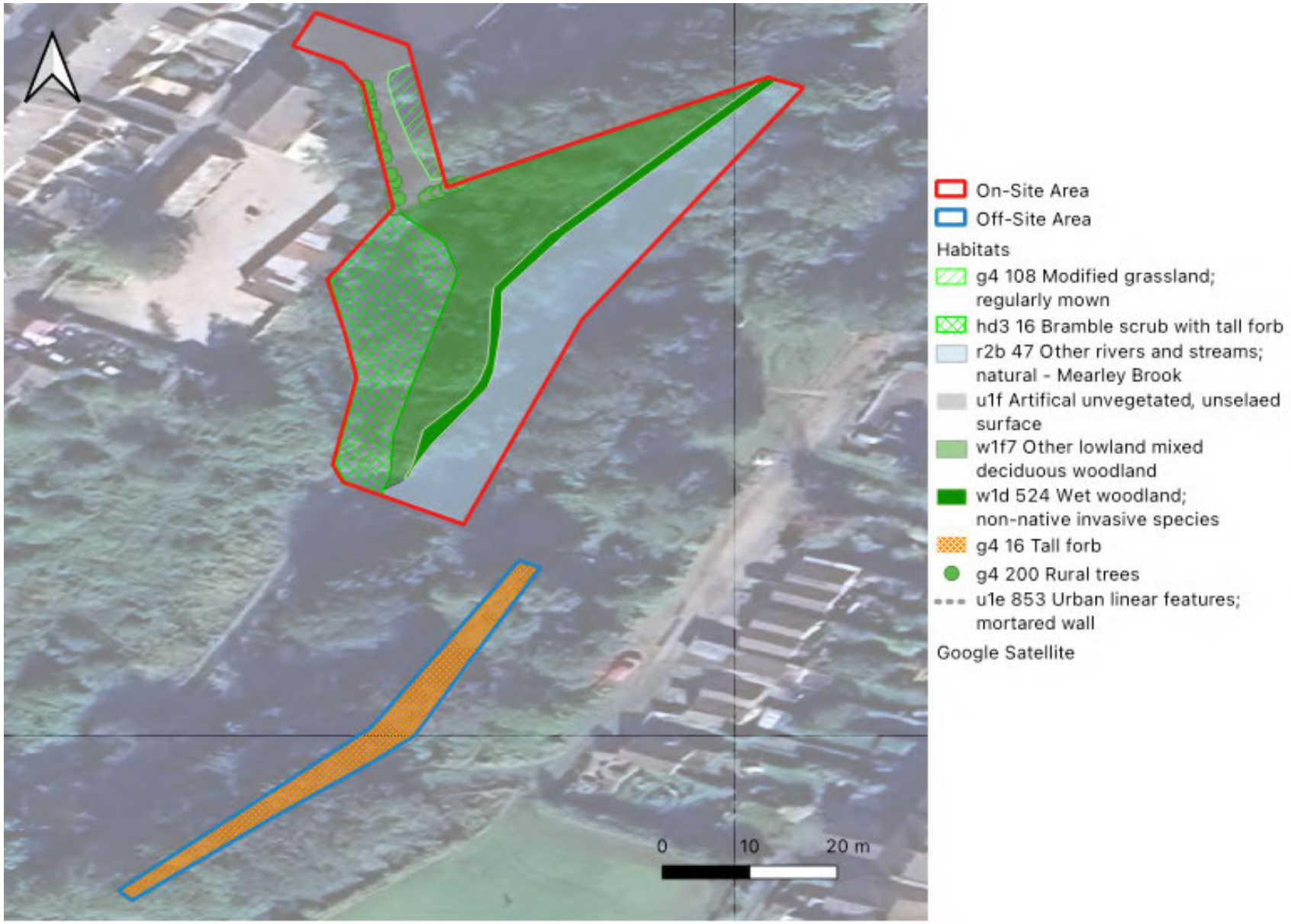
**g4 16 Tall forb**

5.1.24 The Off-Site habitat comprises an approx. 5m wide 79m length of riparian bankside habitat which is composed of tall forb with some grasses and bramble.



The tall forb habitat in the Off-Site area

**Figure 3: The Survey Site – UK Habitat Classification Plan**



## Distinctiveness of the Habitat and Trading Rules

5.1.25 Under the Biodiversity Calculator principals each habitat is categorised into a distinctiveness band.

5.1.26 The distinctiveness of the habitat is based upon parameters such as species richness, diversity, rarity (at local, regional, national and international scales) and the degree to which a habitat supports species rarely found in other habitats (Treweek *et al*, 2010)

- Modified grassland is considered to have low distinctiveness.
- Wet woodland is considered to have high distinctiveness.
- Lowland mixed deciduous woodland is considered to have high distinctiveness.
- Rural trees are considered to have medium distinctiveness.
- Bramble scrub is considered to have medium distinctiveness.
- Other Rivers and Streams are considered to have high distinctiveness.

**Trading Rules**

5.1.27 Habitats of moderate distinctiveness, if lost, must be compensated for with the same broad habitat type or a higher distinctiveness habitat.

5.1.28 A higher distinctiveness habitat must be replaced with the same habitat.

## Habitat Condition Assessment

5.1.29 The condition the habitat on site can be categorised as low, moderate or good and is based upon the Habitat Condition Assessment Sheets within the Statutory Biodiversity Metric. See excel condition assessment.

**Modified Grassland**

5.1.30 The Modified Grassland is considered to be of poor condition because the species richness is poor and the sward height is uniform.

**Wet woodland**

5.1.31 The wet woodland is considered to be of moderate condition because it lacks the structure of the mature woodland. Refer to the condition assessment.

**Lowland mixed deciduous woodland**

5.1.32 The lowland mixed deciduous woodland is considered to be of good condition as it supports good structure and diversity and the ground flora is typical of NVC habitat type.

**Rural trees**

5.1.33 The small hazel trees close to the wall of the school grounds are considered to be of poor condition because they are immature, lack features of ecological values and over sail unvegetated ground.

5.1.34 The ash trees identified within the school grounds with ash dieback are considered to be of poor condition due to health, lack of ecological niches and the fact they are oversailing unvegetated ground.

**Tall forb**

5.1.35 The tall forb is composed predominantly of common nettle (*Urtica dioica*) with dock (*Rumex* sp.) and cleavers (*Galium aperine*). Pendulous sedge (*Carex pendula*) is occasional with frequent dandelion (*Taraxacum* agg.) and cow parsley (*Anthriscus sylvestris*).

5.1.36 Himalayan balsam (*Impatiens grandulifera*) is present as seedlings.

5.1.37 Grasses include cock's-foot (*Dactylus glomerata*) and Yorkshire fog (*Holcus lanatus*). Bramble (*Rubus fruticosus*) is present in patches.

**Watercourses**

*Mearley Brook*

5.1.38 The River Condition Assessment undertaken indicates this stretch of the River Ribble is of fairly poor condition. This condition is significantly impacted by the presence of Himalayan balsam, recorded present (5%-33% cover), on the bank top and margins, the absence of which would result in the brook reaching moderate condition. Refer to Enhancement RCA sheet.

### Strategic Significance

5.1.39 The strategic significance of the habitat present is based upon the value of the habitat in the wider landscape. Consideration is given to the Local Nature Recovery Strategy (2026) (LNRS) local and neighbourhood plans, priority habitats, local nature reserves and local ecological networks.

5.1.40 Primrose Nature Reserve is also a Biological Heritage Site, and for this reason alone, all habitats within the site are included in the metric as 'formally identified in the local strategy'. That the ecological interest of Biological Heritage Sites is maintained and appropriately enhanced is a priority in the LNRS. Additionally, lowland mixed deciduous woodland and wet woodland are Priority Habitats. Maximising biodiversity value of existing woodland habitats is a priority in the LNRS.

5.1.41 The Lancashire LNRS includes ponds, rivers and streams as UK Biodiversity Action Plan Priority Habitats. Although Mearley Brook is not recorded as Priority Habitat on the Priority River Habitat Map produced by DEFRA, it is considered habitats of local importance and have therefore been included within the metric as 'Formally identified in the local strategy'. Enhancement of river, stream and watercourse networks is a priority within the LNRS.

5.1.42 The terrestrial habitat within the school grounds, including rural trees and modified grassland, are recorded as 'area no in local strategy/no local strategy'.

## 5.2 Achieving Biodiversity Net Gain

5.2.1 The EU is committed to halt the loss of biodiversity and the degradation of ecosystem services by 2020. The Biodiversity Strategy sets out 6 targets and 20 specific actions geared towards this overall objective. Action 7 is to ensure no net loss of biodiversity and ecosystem services.

5.2.2 The 'mitigation hierarchy' is included with current planning policy, aiming to halt the loss of biodiversity. The National Planning Policy Framework, consolidating planning guidance states that '*if significant harm cannot be avoided, adequately mitigated, or as a last resort, compensated for, planning permission should be refused*'.

5.2.3 Defra's biodiversity offsetting pilot was developed to address this requirement and ensure development, economic growth and biodiversity conservation are compatible (British Ecological Society, 2013).

5.2.4 Biodiversity net gain, as a good practice principal, has been developed by Ciria, CIEEM and IEMA (BNG, 2016). At the very least developments should aim for no net loss as part of the proposals.

5.2.5 The Headline Results in the Statutory Biodiversity Metric show the overall net change in Biodiversity Units as a result of the development and creation of new habitat.

### Habitat Lost and Trading Rules

5.2.6 The creation of the footpath will result in the loss of 0.0058ha of bramble scrub and 0.006ha of artificial unvegetated, unsealed surface. 4 small rural trees will be removed.

5.2.7 Due to the loss of the bramble scrub and mature trees, which are of medium distinctiveness, the same broad habitats or a high distinctiveness habitats are required to offset the loss.

5.2.8 0.009ha of bramble scrub will be enhanced to created mixed scrub of moderate condition on site. Nineteen small native trees will be planted in the off-site area.

5.2.9 Riparian encroachment On-Site will be increased from no encroachment to minor encroachment in along a short stretch (15m) of Mearley Brook. The same habitat type is required to offset this degradation. A longer stretch (113m) of Mearley Brook will be enhanced On-Site, with an objective to improve the condition from fairly poor to moderate.

5.2.10 The Off-Site portion of the brook side channel will not be significantly enhanced by the proposals.

## On-Site Habitat Enhancement

### Area habitats to be enhanced

5.2.11 The following habitats are to be enhanced On-Site:

- **0.009ha of bramble scrub will be enhanced to mixed scrub of moderate distinctiveness.**

### Watercourse habitats to be enhanced

5.2.12 The following watercourses are to be enhanced On-Site:

- **0.06km of Mearley Brook:** This stretch of the brook will be enhanced from fairly poor condition to moderate condition though appropriate management of non-native invasive species Himalayan balsam.

## Off-Site Habitat Creation

### Area habitats to be created

5.2.13 The following habitats are to be created Off-Site:

- **19 small native rural trees will be planted with an objective to meet moderate condition.**

## 5.3 Habitat Creation and Enhancement

### On-Site: Enhancement of Bramble Scrub to Mixed Scrub of Moderate Condition

5.3.1 To enhance bramble scrub to mixed scrub of moderate condition, the following is proposed:

- Increase in scrub structure by planting hazel, hawthorn and willow to supplement the bramble. Blackthorn would also be acceptable but can be invasive. There must be at least 3 woody species.
- No single species must comprise more than 75% cover.
- Allow growth of young sapling shrubs, whilst retaining more mature specimens
- Creation of glades to allow development of a mosaic of scrub and grassland/tall forb/woodland edge
- Management of non-native invasive species.

### On-Site: Watercourse enhancement

#### Mearley Brook

5.3.2 To reduce to none the riparian encroachment, 113m of the bankside habitat must be managed appropriately. This will be achieved by:

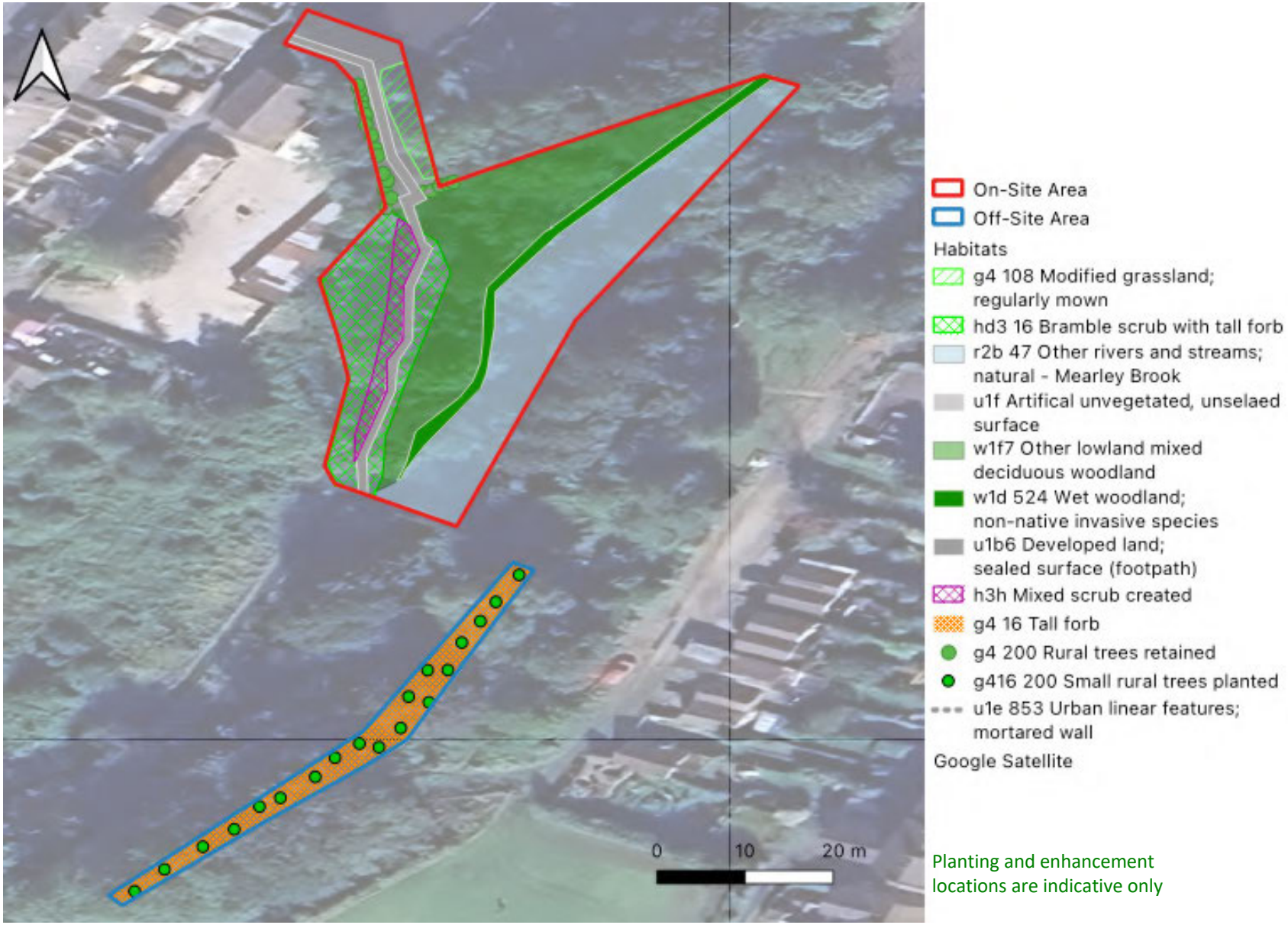
- Long-term management of Himalayan balsam

### Off-Site: Small rural tree planting

5.3.3 To create small rural tree habitat, the following is proposed:

- Small native trees to complement the existing species within the nature reserve are planted on the Off-Site land within tall forb.
- Tree species will comprise alder, hawthorn, wild cherry, rowan and oak.
- The trees must be spaced 5m from dense, high scrub and other trees to allow development of a full canopy.
- Trees must be sourced locally if possible and must be replaced in the first 5 years if they die or become diseased.
- Encouragement of structural tree growth within the riparian zone.

**Figure 4: Proposed Habitat Creation and Enhancement**




Planting and enhancement locations are indicative only

## 5.4 Percentage Change in Biodiversity Units

**On-Site Baseline Habitat Units:** 2.32

**On-Site Habitat Units Change:** -0.04

**On-Site Baseline Watercourse Units:** 0.49

**On-Site Watercourse Units Change:** 0.06

**Off-Site Baseline Habitat Units:** 0.08

**Off-Site Habitats Units Change: 0**.27

**Off-Site Baseline Watercourse Units:** 0.36

**Off-Site Watercourse Units Change:** 0.00

**Total percentage change in Habitat Units:** 10.16%

**Total percentage Change in Watercourse Units:** 12.37%

5.4.1 The Statutory Biodiversity Metric shows there will be an increase of over 10% biodiversity net gain in Habitat Units and Watercourse Units as a result of the proposals. An appropriate Habitat Management and Monitoring Programme will be required to ensure the habitats created reach their appropriate condition over the 30 year period.

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