

Land off Tattenhall Road

Tattenhall

Biodiversity Net Gain (BNG) Feasibility Report

Prepared For: Gladman Developments

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1.0 Introduction

Commission

1.1 The Environment Partnership (TEP) were commissioned by Gladman Developments in October 2024 to undertake a Biodiversity Net Gain (BNG) feasibility assessment to support an outline planning application for the proposed development of approximately 110 new dwellings on the settlement edge of Tattenhall, Cheshire hereafter referred to as the "site".

Background

1.2 The purpose of this report is to provide high level assessment on the BNG delivered for any proposed development in support of an outline planning application for the construction of up to 110 residential dwellings (including affordable housing), introduction of structural planting and landscaping, public open space, sustainable urban drainage system and associated works (all matters reserved except for access).

1.3 The Statutory Biodiversity Metric has been used to assess the net gain output.

1.4 TEP have completed a desk study, UKHab habitat survey and preliminary ecological assessment at the site in May 2026. A River Condition Assessment of the site was also undertaken in May 2026. The relevant reports are as follows:

- Ecological Desk Study (TEP Ref: 10797.03.001, Nov 2024)
- Preliminary Ecological Assessment (TEP Ref: 10797.03.002, Nov 2024)
- River Condition Assessment Survey Report (TEP Ref: 11425.002, Sept 2026) (Annex B)

Site Description

1.5 The footprint of the site boundary measures 6.32ha. The site is located on the edge of Tattenhall, Cheshire in the administrative area of Cheshire West and Chester Council. The location of the site is depicted by the red line shown in Figure 1. The approximate central grid reference of the site is SJ 48887 59319. The site lies on the edge of a residential area, surrounded to the north, east and west by arable and grazing fields.



Figure 1: Site location figure

Objectives

1.6 This report details the ecological surveys undertaken to establish a baseline position, and what the anticipated impacts are.

1.7 The aims of this report are to:

- Set out the methods used to assess the habitat baseline of the site;
- Set out an indicative value of the habitats present on site;
- Determine if the BNG objective of at least 10% gains, can be delivered as a result of site designs and any proposed offsetting; and
- Identify any outstanding BNG shortfalls and how these can be overcome to deliver the BNG objective

Relevant Policy and Legislation

National Policies

1.8 The National Planning Policy Framework (2026) sets out the government's policies for plan making and for making decisions on development proposals in England. It is a material consideration of critical importance in both contexts[1].

1.9 In July 2019, the government issued revised planning practice guidance[2] (NPPG) with details on how planners can implement "net environmental gain" requirements when assessing development proposals, including new advice on protecting wildlife.

1.10 Revised guidance recently published by the government[3] says that net gain in planning describes an approach to development that leaves the natural environment in a measurably better state than it was beforehand. Net gain is an umbrella term for both biodiversity net gain and wider environmental net gain. It states: "Planning conditions or obligations can, in appropriate circumstances, be used to require that a planning permission provides for works that will measurably increase biodiversity".

1.11 In terms of measuring net gain, the guidance states that using a metric is a pragmatic way to calculate the impact of a development and the net gain that can be achieved. It goes on to state that "[…] tools such as the Defra biodiversity metric can be used to assess whether a biodiversity net gain outcome is expected to be achieved".

1.12 The Environment Act 2021 received Royal Assent on 9th November 2021 and includes a mandatory 10% BNG on all Town and Country Planning Act 1990 developments. The 10% BNG requirement became mandated across England in February 2024.

Local Policies

1.13 There are no specific references to a target requirement of biodiversity net gain within the Local Plan, so it is expected that the mandatory 10% net gain will be adopted for this development.

[1] *National_Planning_Policy_Framework.pdf*

[2] Natural environment - GOV.UK (www.gov.uk) (accessed June 2024)

[3] Biodiversity net gain - GOV.UK (www.gov.uk) (accessed June 2024)

2.0 Methods

Ecological and Survey Reference Documents

2.1 To support this assessment the following ecological survey reports were reviewed:

- UKHab Survey and Condition Assessment – TEP 2026;
- River Condition Assessment – TEP 2026; and
- Arboricultural Data - TEP 2024.

Desk Study

2.1 Information regarding planning policies, historic species records and protected sites was collated from a variety of sources. Statutorily protected sites within the National Site Network (NSN) were searched for within 10km of the site. Other statutorily protected sites were searched for within 5km of the site, and non-statutory designations were searched for within 2km of the site.

2.2 The potential presence of irreplaceable habitats[4] was reviewed using Natural England's Priority Habitat Inventory layers and other open-source data available to view on Magic[5].

Habitat Survey

UK Habitat Classification Survey

2.3 A UK Habitat Classification Survey of the site was undertaken by a suitably qualified TEP ecologist (FISC Level 3), in October 2024, this was updated in May 2026. Habitats were assigned using the UK Habitat classification code with reference to the UK Hab conversions provided in the 'Technical Data' button in the calculation tool of the Statutory Biodiversity Metric, the UK Habitat Classification - Habitat Definitions[6] and the UK Habitat Classification Field Key[7].

4 Irreplaceable habitats include: ancient woodland; ancient and veteran trees; blanket bog; limestone pavements; coastal sand dunes; spartina saltmarsh swards; mediterranean saltmarsh scrub; lowland fens - *https://www.gov.uk/guidance/irreplaceable-habitats*

5 *www.magic.gov.uk*

6 UKHab Ltd (2023). UK Habitat Classification Version 2.0 at https://www.ukhab.org

7 Butcher, B., Carey, P., Edmonds, R., Norton, L. and Treweek, J. (2020). UK Hab Field Key V2.1 at http://www.ukhab.org

2.4 Plant species were identified in accordance with Stace (2010)[8] and recorded as target notes using the DAFOR scale[9].

Habitat Condition Assessment

2.5 Condition assessment survey of the area-based habitats within the site were undertaken in conjunction with the UK Habitat Classification Survey, as outlined above. The condition assessments were undertaken using guidance presented in the Statutory Biodiversity Metric - User Guide[10] and the Statutory Biodiversity Metric Condition Assessments[11].

2.6 An RCA survey was required to provide a detailed assessment of the watercourse condition of Keys Brook to inform Biodiversity Net Gain (BNG) calculations. The RCA report is provided at Annex B.

Limitations

2.7 The habitat surveys were undertaken within the optimum survey period of April – October. The level of vegetation growth visible at the time of surveys and the number of identifiable plant species present were sufficient to establish indicative habitat conditions.

BNG Assessment

2.8 The site has been assessed using the Statutory Biodiversity Metric in line with the Statutory Biodiversity Metric - User Guide[12].

2.9 The Statutory Biodiversity Metric is a tool designed to enable developers to measure the change in biodiversity across their site. It determines if there will be net gain, net loss or no net loss of biodiversity following completion of developments and any subsequent management regime. For the purposes of this BNG Feasibility Assessment, the Statutory

[8] Stace, C. (2010) New Flora of the British Isles. 3rd Ed. Cambridge University Press

[9] DAFOR = Dominant, Abundant, Frequent, Occasional & Rare

[10] Department for Environment, Food and Rural Affairs (DEFRA) (2024). The Statutory Biodiversity Metric User Guide. DEFRA, February 2024 at https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf

[11] Department for Environment, Food and Rural Affairs (DEFRA) (2024). The Statutory Biodiversity Metric - Technical Annex 1: Condition Assessment Sheets and Methodology. DEFRA, February 2024 at https://view.officeapps.live.com/op/view.aspx?src=https%3A%2F%2Fassets.publishing.service.gov.uk%2Fmedia%2F65c60f00cc433b000ca90b33%2FStatutory_Biodiversity_Metric_Condition_Assessments-_Feb24.xlsx&wdOrigin=BROWSELINK

[12] Department for Environment, Food and Rural Affairs (DEFRA) (2024). The Statutory Biodiversity Metric User Guide. DEFRA, February 2024 at https://assets.publishing.service.gov.uk/media/65c60e0514b83c000ca715f3/The_Statutory_Biodiversity_Metric_-_User_Guide_.pdf

Biodiversity Metric was utilised to measure the biodiversity unit value of habitats across the site.

2.10 To calculate the biodiversity unit value across the site, a site survey is undertaken by a suitably qualified ecologist to determine the habitats present, their location, size, and condition. This information is then digitised, and the resulting information inputted into the Statutory Biodiversity Metric.

Determining Strategic Significance

2.11 The LNRS for Cheshire and Warrington has been used to determine strategic significance for the site in line with the Statutory Biodiversity Metric User Guide.

3.0 Baseline Conditions

On-site Baseline

3.1 Area habitat is dominated by modified grassland, with areas of tall ruderal vegetation, mature broadleaved trees and pond.

3.2 Linear habitats include boundary hedgerows.

3.3 The following drawings are appended to illustrate the site baseline conditions:

- Baseline UK Habitats Drawing G11425.005; and
- Baseline Habitat Condition and Strategic Significance Drawing G11425.011.

3.4 The condition assessment details which condition each habitat has failed or passed and reasons why. These results can help identify areas to maximise the potential of the sites to deliver biodiversity net gain units by adjusting management regimes and site design to pass certain criteria, achieve a better condition, and therefore better biodiversity value of the habitats on site.

3.5 The LNRS for Cheshire and Warrington has been used to determine strategic significance for the site in line with the Statutory Biodiversity Metric User Guide and so strategic significance for baseline habitats was assigned to be low.

3.6 Area habitats included within this assessment consist of the following:

- Modified Grassland
- Tall Ruderal
- Pond
- Rural Trees; and
- Developed Land: Sealed Surface

3.7 Linear habitats included within this assessment consist of the following:

- Hedgerows
- Watercourse – Other rivers and streams.

Description of Habitats

Area Habitat

3.8 The site comprises horse grazed pasture, bounded by hedgerows and mature trees. A bunded bank with tall ruderal growth is situated at the western edge of the field with a small ephemeral pond also located to the west.

3.9 Tall ruderal is present at the west of the site on top of a bunded bank. This is dominated with nettle *Urtica dioica* with some willowherb *Epilobium sp*. and spear thistle *Cirsium vulgare*.

3.10 The site has several mature trees to the site borders. These trees are mature and in good condition however, there is one dead tree located to the eastern border. The understorey is generally dominated with nettle and grass species.

3.11 One small sized ephemeral pond was present within the northwest section of the field during the survey. This pond was dry at the time of survey and therefore could not be eDNA tested and was subsequently categorised as a non-priority habitat.

Linear Habitat

3.12 All hedgerows within the site were comprised of native species, thus qualifying as habitats of principal importance. The hedgerows to the east boundary and part of the north boundary (H1, H2) were species rich. H1 incorporated sufficiently frequent trees to be classified as species rich native hedgerow with trees. H2 formed a boundary shared with a private residential property to the north of the site and was well maintained.

3.13 The hedgerows to the north, west and south boundaries (H3, H4, H5) were generally species poor. Hedgerows H3 and H4 were species poor and well maintained, with the appearance of being flailed annually.

3.14 Hedgerow H5 was species poor and located along part of the southern boundary of the site and parallels Keys Brook.

3.15 The Keys Brook lies to the southern site border. A River Condition Assessment (RCA) of the Brook has been undertaken and is reported separately (TEP Ref 11425.002 – Annex B).

3.16 The baseline habitats and biodiversity units are displayed below in Figure 2, for both area-based and linear habitats.

On-site baseline		
	Habitat units	21.85
	Hedgerow units	6.10
	Watercourse units	1.62

Figure 2: On-Site Baseline Results

Table 1: Summary of baseline area-based habitats

Baseline UK Hab Classification	Area (ha)	Baseline Condition	Strategic Significance	Baseline (BU)
Modified grassland	6.20	Poor	Low	12.39
Sparsely vegetated land – Ruderal/ephemeral	0.03	Poor	Low	0.06
Lakes - Ponds (non-priority habitat)	0.01	Moderate	Low	0.09
Rural Trees 7 Medium trees 3 Large trees 7 Very Large trees	0.7591	Good	Low	9.30
Developed Land; sealed surface	0.08	N/A	Low	0.00
TOTAL AREA-BASED HABITAT UNITS				**21.85**

Table 2: Summary of linear-based habitats

Baseline UK Hab Classification	Length (km)	Baseline Condition	Strategic Significance	Baseline (BU)
Hedgerows				
Species-rich Native Hedgerow with Trees – H1	0.13	Good	Low	2.34
Species-rich Native Hedgerow – H2	0.09	Good	Low	1.08
Native Hedgerow – H3	0.09	Good	Low	0.52

Native Hedgerow – H4	0.16	Good	Low	0.96
Native Hedgerow – H5	0.20	Good	Low	1.20
			TOTAL HEDGEROW UNITS	**6.10**
Watercourse				
Other Rivers and Streams	0.3	Fairly Poor	Low	1.62
			TOTAL WATERCOURSE UNITS	**1.62**

On-Site Post Development Habitats

3.17 Details regarding post-development habitats are provided in the following drawings and plans:

- PS10797.002C Development Framework Plan
- Proposed Habitats – G11425.013
- Proposed Condition & Significance – G11425.014
- Habitat Impact – G11425.012
- Preliminary Surface Water Drainage Strategy' by enzygo ref SHF1132307-ENZ-XX-XX-DR-D-0002 vP02

3.18 Ecologically valuable habitats present within the site boundaries, including the modified grassland, ruderal/ephemeral and pond are to be lost.

3.19 Hedgerow H1 is to be partially retained. Part of H1 will be removed to allow for access to the site from Tattenhall Road.

3.20 Tree T21 which is located within hedgerow H1 will be removed to allow for access to the site from Tattenhall Road.

3.21 All other boundary hedgerows and trees are to be retained. New hedgerow planting has been incorporated into the development masterplan which will also fill any gaps to the existing hedgerows.

3.22 Area habitats to be provided within the post development proposals include:

- 0.38ha of modified grassland
- 2.14ha of other neutral grassland
- 0.04ha of ponds (non-priority habitat)

- 0.06ha of urban – allotments
- 2.23ha of developed land: sealed surface
- 0.95ha of urban – vegetated garden
- 0.25ha of sustainable drainage system
- 0.28ha of other woodland; broadleaved
- 47 urban street trees
- 133 urban trees in open space

3.23 Linear habitats to be provided within the post development proposals include:

- 0.141km of native hedgerow
- 0.385km of species rich native hedgerow with trees.

3.24 As detailed landscape proposals are not yet produced, post-intervention habitats applied a default 70:30 ratio of 'urban – developed land; sealed surface' to 'urban – vegetated garden' within areas outlined for housing in accordance with the SBM User Guide

3.25 To achieve a biodiversity net gain in watercourse units, enhancement of the riparian zone along the right bank is proposed through the reduction of encroachment within the riparian zone. Full details are proposed in Annex B.

3.26 Full details of the conversion from the masterplan to the UK Habitat classification along with the target condition are provided in the Assessor Comments within the completed Statutory Biodiversity Metric (provided under separate cover, TEP Ref x11425.001).

Strategic Significance

3.27 The LNRS for Cheshire and Warrington has been used to determine strategic significance for the site in line with the Statutory Biodiversity Metric User Guide.

3.28 The following measures intersect the site (Table 3):

Table 3: Priority actions applicable to the site

Habitat	Priority Action with LNRS	Relevance to site
Watercourses	**WA1.7 Action:** Create and restore a variety of riverside (riparian) and in-channel habitats. **U1.1 Action:** Safeguard and expand nature corridors within urban areas, to connect with broader landscape corridors.	There is no development proposed along the watercourse so a nature corridor within the urban area will be safeguarded. Therefore, the post-development watercourse has been assigned a High strategic significance - formally identified in local strategy.
Woodlands, Hedgerows and Trees	**W3.4 Action:** Create and safeguard a network of urban trees and woodlands.	The southeastern corner and southwestern corner are covered by this priority action. An estimated 40 new and existing trees are within these areas. These trees have been assigned high strategic significance whilst the remaining trees will be low.
Grassland & Heathland	**G1.1 Action:** Create and enhance a network of species-rich grassland sites	Although the current Development Framework Plan has some created grassland areas as other neutral grassland within the action area, no detailed planting proposals have been provided. All other neutral grassland has therefore been assigned low strategic significance; however, this will be highlighted as an opportunity for further BNG improvements at detailed design.

4.0 Change in Ecological Value

4.1 A biodiversity assessment has been undertaken, using the Statutory Biodiversity Metric calculator, to quantify the change in biodiversity units for the planning application area between the pre-development baseline and post-development.

4.2 Detailed results of the assessment are provided in the Statutory Biodiversity Metric (provided under a separate cover, TEP ref x11425.001).

Summary of Biodiversity Impact

4.3 The site area totals 6.32ha. The results are based on the assumption that all area habitats within the site will be lost, however, if retention/enhancement of existing habitats is proposed, the habitat units are subject to change. Figure 3 presents the headline results, taken from the metric and based on the above figures and impacts.

FINAL RESULTS		
Total net unit change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	8.65
	Hedgerow units	2.99
	Watercourse units	0.54
Total net % change (Including all on-site & off-site habitat retention, creation & enhancement)	*Habitat units*	39.60%
	Hedgerow units	48.96%
	Watercourse units	33.40%
Trading rules satisfied?	Yes ✓	

Figure 3: Headline Results from Metric

4.4 Based on the site footprint alone and proposed masterplan, the headline results indicate a net gain of greater than 10% for habitat, hedgerow and watercourse units.

Trading Rules Summary

4.5 All trading rules have been satisfied.

5.0 Recommendations

5.1 This BNG assessment has been undertaken in support of an outline planning application and details of the landscape design have also been provided by TEP. These have been assessed to indicate the condition of habitats that is expected to be achieved following completion of the development.

5.2 To fully meet BNG requirements, a detailed 30-year management and monitoring plan will be necessary. It is assumed that this information can be committed to using a suitably worded condition attached to the application's decision notice.

5.1 The plan will need to include management prescriptions which aim to achieve the specific target condition for each habitat, based on the Statutory Biodiversity Metric condition criteria. The plan will also need to include the methods and reporting processes to be used for monitoring the success of habitat enhancement and creation along with options for remedial intervention where needed if a habitat is not achieving its targeted condition. Roles and responsibilities, along with financial and legal requirements should also be included

Annex A: The Statutory Biodiversity Metric

(Provided as a separate document)

Annex B: River Condition Assessment



Land to the West of Tattenhall Road, Tattenhall, Cheshire

River Condition Assessment Survey Report

Prepared For: Gladman Developments

Document Reference: 11425.002

September 2026

Version 1.0

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Drawing 1: MoRPh River Survey Locations (Ref G11425.002)

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Appendix B: MoRPh Survey Methodology
Appendix C: Detailed MoRPh5 & Post-development Scenario Results
Appendix D: Condition Score Classes Example Post Development Interventions
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Executive Summary

Introduction

1. The Environment Partnership (TEP) was commissioned by Gladman Developments to undertake a River Condition Assessment (RCA) of Keys Brook within a site known as Land west of Tattenhall Road in Tattenhall, Cheshire, to inform the watercourse element of the Biodiversity Net Gain assessment for a proposed residential development.

Methods

2. An RCA survey was undertaken in May 2024. The RCA comprised a Modular River Physical (MoRPh) survey and a River Type desk study.

3. A post-development scenario was assessed based on outline proposals provided by TEP and Enzygo.

Key Constraints

4. There were no constraints to the survey.

Results

5. Keys Brook contains two subreaches within the site: Subreach W1.1 and W1.2.

6. The baseline final condition for both subreaches is Fairly Poor.

7. The baseline riparian zone encroachment is Major for the left bank and Major for the right bank. The baseline watercourse encroachment is Minor.

8. The proposed development results in no change in condition or watercourse encroachment for both subreaches. There is a reduction in riparian zone encroachment on the right bank for both subreaches as a result of the proposals which should be recorded as an enhancement in the Statutory Biodiversity Metric.

Conclusions

9. The Statutory Biodiversity Metric calculator tool has been used to compare the baseline watercourse units with the post-development watercourse units. The calculations show there will be a net gain of 0.54 watercourse units (+33.4%) on-site as a result of the current proposals.

Management and Monitoring

10. To fully meet BNG requirements for those elements of the scheme requiring planning permission, a detailed 30-year management and monitoring plan will be necessary. The plan will need to include management prescriptions which aim to achieve the specific target condition for each habitat, based on the Statutory Biodiversity Metric criteria.

1.0 Introduction

Commission

1.1 The Environment Partnership (TEP) was commissioned by Gladman Developments to carry out a River Condition Assessment (RCA) for a proposed residential development scheme known as Land west of Tattenhall Road, Tattenhall, Cheshire; hereafter referred to as the 'site'.

Background

1.2 Due to the presence of Keys Brook running along the southern boundary of the site, a RCA survey was required to assess the condition of the watercourse to inform Biodiversity Net Gain (BNG) calculations.

1.3 The purpose of this report is to provide a detailed assessment of the watercourse condition of Keys Brook to inform the design and considerations for the Statutory Biodiversity Metric.

1.4 The RCA combines field and desk-based information to determine a condition score for the watercourse which will ultimately feed into the watercourse component of the Statutory Biodiversity Metric.

Site Description

1.5 The site is located on the northern edge of Tattenhall, Cheshire. The approximate central grid reference of the site is SJ 48887 59319.

1.6 Keys Brook runs east to west immediately adjacent to the southern boundary of the site. The brook is identified as a statutory main river.

1.7 The location of Keys Brook within the context of the site is shown on Drawing G11425.002 MoRPh River Survey Locations.

Objectives

1.8 This report details the surveys undertaken to establish a baseline position for the condition of the watercourse using the Modular River Physical (MoRPh) survey methodology and the results of the post-development assessment.

1.9 The aims of this report are to:

- Set out the methods used to assess the baseline condition of the watercourse.

- Provide a baseline condition of the watercourse.
- Identify whether a 10% net gain in watercourse units is achieved under the current proposals, based on an assessment of other rivers and streams habitat only.

Proposed Development

1.10 The proposals are for an outline planning application for the erection of up to 110 residential dwellings (including affordable housing), introduction of structural planting and landscaping, public open space, sustainable urban drainage system and associated works (all matters reserved except for access). The design parameters are set out in the Development Framework Plan (TEP Drawing No: PS 10797.002C - Appendix A)

2.0 Methods

2.1 A pre-development RCA of Keys Brook was undertaken by a TEP RCA accredited ecologist. The survey was undertaken on 13th May 2026. The RCA comprised a Modular River Physical (MoRPh) survey and a River Type desk study. The RCA was undertaken in accordance with the MoRPh Survey Technical Reference Manual[1] and the Guide to Assessing River Condition[2].

2.2 Further information on the MoRPh survey methodology can be found in Appendix B.

2.3 MoRPh5 surveys are repeated so that a minimum of 20% of the length of watercourse within the proposed red line boundary is surveyed. The survey design for Keys Brook is outlined in Table 1 below. The survey included the length where a new outfall is proposed from the development.

Table 1: MoRPh Survey Design

Watercourse	Approximate Length Within Site Boundary (m)	20% of Length (m)	River Width	Module Length	Number of MoRPh5 Surveys Required	Actual Length of Watercourse Surveyed (m)
Keys Brook	300m	60m	<5m	10m	2	100m

Limitations

2.4 There were no limitations to the RCA.

[1] Gurnell, A. and Shuker, L. (2025) The MoRPh Survey Technical Reference Manual 2025 version.
[2] Gurnell, A., England, J., Scott, S., and Shuker, L. (2024) A Guide to Assessing River Condition. Part of the Rivers and Streams Component of the BioDiversity Net Gain Metric.

3.0 Results

Watercourse Categorisation

3.1 The Statutory Biodiversity Metric User Guide states that a ditch is an “artificially created linear water-conveyancing feature which is less than five metres wide and is likely to retain water for more than four months of the year”.

3.2 The form of Keys Brook indicates that it was not originally artificially created and therefore it does not meet the definition of a ditch as described in the Statutory Biodiversity Metric User Guide.

3.3 The watercourse is not included in Natural England's Priority River Habitat online mapping[3] or Priority River Habitat - Headwater Areas[4]. Although the watercourse is within 2.5km of its furthest source, from a review of the RCA results and inspection of historic mapping[5] and aerial imagery it is considered that it has been significantly altered and therefore does not meet the 'headwaters' criteria.

3.4 It has therefore been assigned the watercourse type of ‘other rivers and streams’. As such, an RCA of this watercourse was undertaken.

MoRPh Survey

3.5 Two MoRPh5 surveys were undertaken covering a total survey length of 100m.

3.6 The locations of each MoRPh5 subreach are shown on Drawing G11425.002 MoRPh River Survey Locations.

3.7 Full results of the MoRPh5 survey are provided within Appendix C.

3.8 Representative photos from each MoRPh5 are provided in Figures 1 and 2 below.

[3] https://naturalengland-defra.opendata.arcgis.com/datasets/priority-river-habitat-rivers-england/explore?location=53.080739%2C-2.704123%2C11

[4] https://naturalengland-defra.opendata.arcgis.com/datasets/priority-river-habitat-headwater-areas-england/explore?location=53.046287%2C-2.586496%2C10

[5] https://maps.nls.uk/os/



Figure 1: Subreach W1.1



Figure 2: Subreach W1.2

River Type Survey

3.9 A River Type was assigned for the entire reach of Keys Brook, which includes the length of the watercourse on site.

3.10 Results of the River Type survey are detailed in Table 2 below. The calculated River Type has been overridden as a result of the field surveys observation and absence of any recorded sand in the modules.

Table 2: River Type Survey Results

River Type Indicator	Keys Brook River Type Result
Upstream point of reach	SJ 49453 59052
Downstream point of reach	SJ 47980 59165
River Category	Other River
A1: Braiding Index	1.000
A2: Sinuosity Index	1.060
A3: Anabranching Index	1.000
A4: Level of Confinement	Partially confined
A5: Reach Valley Gradient	0.005
A6: Bedrock Reach	False
A7: Coarsest Bed Material	Cobble
A8: Average Bed Material	Sand
Calculated River Type	H - Straight/sinuous, coarsest GP, average SA
Override/Final River Type	K - Straight/sinuous, coarsest SA, average SI

River Condition

3.11 The preliminary condition score and final condition class for each MoRPh5 subreach are shown in Table 3 below.

3.12 Please see Appendix D for the threshold values for allocating preliminary condition scores[6].

[6] Gurnell, A., England, J., Scott, S., and Shuker, L. (2024) A Guide to Assessing River Condition. Part of the Rivers and Streams Component of the BioDiversity Net Gain Metric.

Overdeepening

3.13 The river shape values of each of the MoRPh5 subreaches are provided in Table 3 below.

3.14 Subreach W1.1 has a river shape value of less than two and subreach W1.2 has a river shape value of between 2 and 4. Therefore, overall, the channel is highly likely to be overdeep.

3.15 Both MoRPh5 subreaches recorded a final condition class of Moderate (Table 4). However, the channel is considered to be overdeep, and therefore the final condition of Keys Brook should be reduced by one class to Fairly Poor.

Table 3: River Condition and Overdeepening Results

MoRPh Subreach	Preliminary Condition Score	Final Condition Class	River Shape Value	Amended Condition Following Overdeepening Assessment
W1.1	0.802	Moderate	1.537	Fairly Poor
W1.2	0.988	Moderate	2.121	Fairly Poor

Encroachment

3.16 Encroachment results are provided in Table 4 below.

Table 4: Encroachment Results

MoRPh Subreach	Riparian Zone Encroachment		Watercourse Encroachment
	Left Bank	Right Bank	
W1.1	Major	Major	Minor
W1.2	Major	Major	Minor

3.17 Both subreaches had major riparian encroachment on the left bank and right bank. This is due to the presence of residential properties on the left bank top and a field used for horse grazing on the right bank top.

3.18 Both subreaches had minor watercourse encroachment due to short section of engineered bank revetment on the left banks (covering 5-20% of the bank length in each subreach).

Strategic Significance

3.19 Strategic significance was determined through a review of the BNG User Guide and the Cheshire and Warrington Local Nature Recovery Strategy (LNRS). Further information on determining the strategic significance can be found in Appendix B.

3.20 The watercourse surveyed has been assigned a Low strategic significance within the baseline of the Statutory Biodiversity Metric.

Biodiversity Metric

3.21 The subreaches of Keys Brook within the site boundary should be programmed into the Statutory Biodiversity Metric as separate lines within the watercourse tab.

3.22 The final condition for both subreaches to be input into the metric is Fairly Poor.

3.23 The Strategic Significance for both subreaches to be input into the metric is Low.

3.24 The riparian zone encroachment is Major for the left bank and Major for the right bank for both subreaches.

3.25 The watercourse encroachment is Minor for both subreaches.

4.0 Post-development Scenario

4.1 In order to assess the impact of the proposals on the watercourse, a post-development scenario was run. This was completed using the Cartographer website and involved amending the baseline MoRPh survey data in line with what is proposed.

4.2 The post development scenario was based on the Development Framework Plan (TEP Drawing No: PS 10797.002C) and the NPPF: Flood Risk Assessment & Outline Drainage Strategy (Enzygo Report Ref: SHF.1132.307.HY.R.001.A).

MoRPh Post-development Scenario

4.3 Full results of the MoRPh5 post-development scenario results are provided within Appendix C.

4.4 Several indicators on the right bank only have changed as a result of the proposed development and associated landscaping.

4.5 Banktop artificial cover (B5) will be removed for both subreaches as the land use within 10m of the watercourse will be changed from the current extensive permanently vegetated agriculture to a semi-natural habitat (as a result of the proposed natural semi-natural greenspace/other neutral grassland).

4.6 As a result of the proposed landscaping the abundance of short/creeping herbs/grasses has been reduced to present from extensive for all modules in both subreaches. Similarly the abundance of tall herb / grasses has increased to extensive for both subreaches. The abundance of saplings/trees has increased to present as a result of the proposed tree planting.

4.7 The addition of a new outfall from the proposed development on the right bank of module 4 of subreach 2 results in the inclusion of concrete reinforcement of the bank face (whole) but only at trace extent, and the introduction of a pipe (artificial physical feature)..

4.8 All other parameters remain unchanged.

River Type Post-development Scenario

4.9 The river type is not altered from the baseline for the post-development scenario.

River Condition

4.10 The preliminary condition score and final condition class for each MoRPh5 subreach within the post-development scenario are shown in Table 5 below. Both subreaches have a final condition class of Fairly Poor.

Overdeepening

4.11 As no change to the river shape has occurred, the overdeepening assessment remains the same as the baseline.

4.12 Both MoRPh5 subreaches recorded a final condition class of Moderate. However, the channel is considered to be overdeep, and therefore the condition of Key's Brook is reduced by one class to Fairly Poor (Table 5).

Table 5: River Condition and Overdeepening Results

MoRPh Subreach	Preliminary Condition Score	Final Condition Class	Increase in score required to meet next condition class	River Shape Value	Amended Condition Following Overdeepening Assessment
W1.1	0.854	Moderate	0.346 (1.2)	1.537	Fairly Poor
W1.2	0.988	Moderate	0.212 (1.2)	2.121	Fairly Poor

Encroachment

4.13 Post-development scenario encroachment results are provided in Table 6 below.

Table 6: Post-development Encroachment Results

MoRPh Subreach	Riparian Zone Encroachment		Watercourse Encroachment
	Left Bank	Right Bank	
W1.1	Major	No Encroachment	Minor
W1.2	Major	No Encroachment	Minor

4.14 Riparian zone encroachment has reduced on the right bank in both subreaches to no encroachment as a result of the change in management practice from the current intensive horse grazing to natural semi-natural greenspace/other neutral grassland.

4.15 No change to the left bank riparian encroachment or watercourse encroachment values will occur as a result of the proposals.

Strategic Significance

4.16 The post development intervention(s) are consistent with a mapped potential measure in the LNRS for the habitat parcel(s):

- **WA1.7 Action:** Create and restore a variety of riverside (riparian) and in-channel habitats.
- **U1.1 Action:** Safeguard and expand nature corridors within urban areas, to connect with broader landscape corridors.

4.17 Therefore, the watercourse surveyed has been assigned a High strategic significance - formally identified in local strategy.

Biodiversity Metric

4.18 The subreaches of Keys Brook within the site boundary should be programmed into the Statutory Biodiversity Metric as enhanced.

4.19 The final condition for both subreahes of Keys Brook to be inputted into the post-development section of the metric is Fairly Poor.

4.20 The Strategic Significance to be input into the metric is High for both subreaches - formally identified in local strategy.

4.21 The riparian zone encroachment to be input into the post-development section of the metric is Major for the left bank and No encroachment for the right bank.

4.22 The watercourse encroachment to be input into the post-development section of the metric is Minor.

5.0 Conclusions

5.1 A River Condition Assessment has been undertaken for Keys Brook within the site.

5.2 As the on-site baseline contains watercourses, a 10% net gain in watercourse units will need to be demonstrated by the proposals.

5.3 The calculations show the watercourses on-site, have a combined baseline value of 1.62 watercourse units. The post-development scenario indicates that the watercourses will have a combined value of 2.16 watercourse units following completion of the development.

5.4 The calculations show there will be a net gain of 0.54 watercourse units (+33.4%), as a result of the current proposals and as such it is considered that the development meets the policy requirements for the delivery of watercourse units.

5.5 Additional net gain could be achieved through improving positive watercourse indicators or reducing negative indicators to improve the overall condition of the watercourse. Key indicators to maintain condition are those with high scores, such as 3 or 4 on positive indicators. Indicators which present opportunities for improvements are those with low scores, such as -3 or -4 on negative indicators. Enhancement opportunities are however restricted to the right bank due to land ownership.

5.6 Examples of natural, cost-effective, relatively low-input post development interventions which are applicable to most sites where development is not proposed in the riparian zone; are provided in Appendix E.

6.0 Implementation, Management and Monitoring

6.1 To fully meet BNG requirements for those elements that require planning permission, a detailed 30-year management and monitoring plan will be necessary. It is assumed that this information can be committed to using a suitably worded condition attached to the application's decision notice.

6.2 The plan will need to include management prescriptions which aim to achieve the specific target condition for each habitat, based on the Statutory Biodiversity Metric condition criteria. The plan will also need to include the methods and reporting processes to be used for monitoring the success of habitat enhancement and creation along with options for remedial intervention where needed if a habitat is not achieving its targeted condition. Roles and responsibilities, along with financial and legal requirements should also be included.

Drawings

Drawing 1: MoRPh River Survey Locations (Ref G11425.002)



KEY

Site boundary

MoRPh River Survey

River type reach

Subreach in fairly poor condition

MoRPh5 subreach

Note:

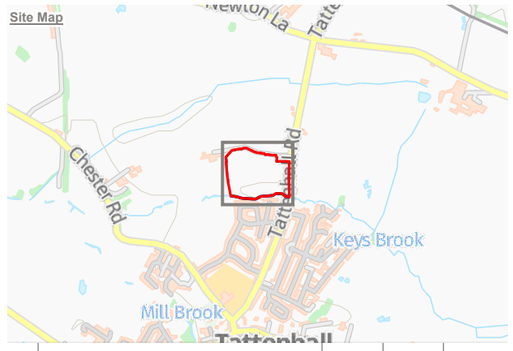
- Each MoRPh5 subreach comprises five contiguous MoRPh modules.

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Site Map



Rev	Description	Drawn	Approved	Date

THE ENVIRONMENT PARTNERSHIP

401 Faraday Street, Birchwood Park, Warrington, WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land to the West of Tattenhall Road

Title
MoRPh River Survey Locations

Drawing Number
G11425.002

Drawn	Checked	Approved	Scale	Date
RL	BJ	AE	1:1,157 @ A3	11/06/2025

Appendix A: Development Framework Plan (TEP Drawing No: PS 10797.002D)

1. Residential development area
2. Vehicular access from Tattenhall Road with new pedestrian crossing
3. Area for drainage attenuation including wetland meadow grassland and marginal planting to enhance biodiversity
4. Wildlife pond with marginal aquatic planting as a replacement pond twice the size as original
5. Development set back approximately 20m from the western and northern boundaries with native tree and woodland planting and naturalistic open space to buffer the development, provide a wildlife corridor and form a new attractive settlement edge
6. Informal pedestrian routes at the site edges for recreation
7. High Voltage 11kV Overhead Cables Diverted / Undergrounded
8. East-west green link inspired by the local green spaces in Tattenhall including central amenity open space, play area and opportunity for feature buildings
9. Allotments with parking provision
10. New native species rich hedgerow planting and native hedgerow trees to site boundaries connecting to the existing hedgerows
11. Semi natural open space along the brook with native tree planting and opportunities for wildlife and recreation
12. Pedestrian connection up to boundary

Greaves Farm Cottage
Greaves Farm
Greaves Meadow Barns
Greaves Cottage
TATTENHALL ROAD
GREENLANDS
GREENLANDS
TATTENHALL ROAD

Key

Existing

- Application Boundary (6.32ha)
- Trees
- Hedgerow
- Waterbody/Watercourse
- High Voltage 11kV Overhead Cables
- Overhead Cables

Proposed

- Vehicle Access
- Residential Development Area (3.11ha) Up to 110 dwellings at 35dph
- Key Nodal Space
- Amenity Green Space (0.35ha)
- Natural/Semi Natural Greenspace with Meadow Grassland incl. Drainage (2.81ha)
- Drainage Attenuation with Wetland Meadow
- Allotments With Parking Provision (0.05ha)
- Woodland Planting
- Tree Planting
- Hedgerow Planting (native species-rich)
- Wildlife Pond
- Footpath
- Play Space
- Foul Pumping Station

0 20 40 60 80 100m

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Aerial: Maxar, Microsoft

Rev	Description	Drawn	Approved	Date
D	Flood zone updated in line with EA consultation	SO	NKH	26/11/25
C	Updated internal roads, planting and drainage	EL	NKH	15/05/25
B	Updated drainage	EL	NKH	27/03/25
A	Updated layout in line with client comments	EL	NKH	13/03/25

TEP | THE ENVIRONMENT PARTNERSHIP
401 Faraday Street, Birchwood Park, Warrington WA3 6GA
Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Land West of Tattenhall Road, Tattenhall

Title
Development Framework Plan

Drawing Number
PS10797.002D

Drawn	Checked	Approved	Scale	Date
AL/EL	NKH	NKH	1:2,000 @ A3	12/02/2025

Appendix B: MoRPh Survey Methodology

Watercourse Categorisation

The on-site watercourses were compared against the descriptions within the Statutory Biodiversity Metric User Guide[7] to assess whether they meet the criteria of a watercourse which would require RCA. Ditches and culverts do not require RCA, but priority habitat watercourses, other rivers and streams, and canals do require RCA. The definitions of each of these watercourse types are provided within the Statutory Biodiversity Metric User Guide.

MoRPh Survey

The MoRPh survey was undertaken by the accredited ecologist and a health and safety assistant. The survey entails collecting information along the watercourse in a series of 'modules'. The module length is determined by the MoRPh river width, as per Table 1. Sets of five contiguous modules were recorded, one for each subreach, to create a series of 'MoRPh5' locations (five contiguous MoRPh surveys).

Determining Your Module Length (adapted from MoRPh Field Survey Sheet[8])

River Width (m)	Module Length (m)
<5m	10m
5 to <10m	20m
10 to <20m	30m
20 to <30m	40m
Large and navigable rivers and canals >30m	50m

The MoRPh survey characterises the channel, banks and immediate bank tops (to 10 m from the bank top edge) of a watercourse. The survey records the extent and character of bank and bed sediments, morphological and hydraulic features/habitats, riparian and aquatic vegetation extent and structure, presence and extent of non-native invasive plant species, bank top land use pressures and human interventions within the river channel. Once the survey was completed the data was entered into the Cartographer website[9] to generate a preliminary RCA condition score.

River Type Survey

A River Type desk study was then undertaken by the RCA accredited ecologist. The River Type is assessed using eight indicators extracted from a desk study of the reach within which the study site is located and bed material information derived from the MoRPh survey

[7] DEFRA (2025) The Statutory Biodiversity Metric User Guide
[8] Modular River Survey (2025) MoRPh Survey Sheets v15
[9] Cartographer Studios Ltd (2025) Cartographer

results. The Cartographer website is then used to conduct the necessary analyses to provide the final RCA condition score.

River Condition

The river condition results are provided by Cartographer as a result of combining the MoRPh survey results and the River Type survey results. A preliminary condition score and final condition class are provided for each subreach.

Overdeepening

Many watercourses within England suffer from a legacy of channel modifications. One example of this is the existence of channels that are 'overdeep', such that they are hydrologically and ecologically disconnected to some degree to their bank tops and floodplain. Overdeep channels may support a diverse range of physical habitats but if these are hydrologically disconnected to some degree it reduces their potential to support biodiversity.

Within the RCA, an assessment of overdeepening can be made based on the river shape index calculated within Cartographer. If river shape has a value of less ≤ 2 then the channel is highly likely to be overdeep. If river shape has a value of less ≤ 4 then the channel is likely to be overdeep.

In accordance with the Guide to Assessing River Condition, where a channel is overdeep the final condition class should be reduced by one class (e.g. from Good to Fairly Good, or Moderate to Fairly Poor).

An assessment of whether the channel is overdeep was undertaken to identify whether the final RCA condition score should be reduced by one condition class.

Encroachment

Watercourse encroachment and riparian zone encroachment were recorded for each of the MoRPh5 subreaches, in line with the definitions outlined within the Statutory Biodiversity Metric User Guide. Following this, overall encroachments were assigned for the whole watercourse based on the sample results of the MoRPh5 subreaches.

Strategic Significance

The BNG User Guide states that if a LNRS has been published, the baseline strategic significance values for habitat parcels in that area should always be scored as low; and the post-development strategic significance should be assigned as High when:

- "The location of the habitat parcel has been mapped in the Local Habitat Map as an area where a potential measure has been proposed to help deliver the priorities of that LNRS; and

- The proposed intervention is consistent with the mapped potential measure in the LNRS for the habitat parcel".

The guidance states that strategic significance should be assigned as Low when these conditions are not met.

Appendix C: Detailed MoRPh5 & Post-development Scenario Results

River Condition Assessment (RCA) Results for: Priority Rivers, Other rivers, Canals			
Site Name/Location	Land to the West of Tattenhall Road Tattenhall	Unique river section reference	Subreach W1.1
GPS of MoRPh5	SJ 48846 59198	Subreach length	224m

RCA River Type and Habitat Description for full river section

Type of Assessment		Baseline Assessment Results		Post development Assessment Results	
Condition Assessment Criteria		**RCA Index Values**	**Notes/Justification**	**RCA Index Values**	**Notes/Justification**
RCA Index ID	**RCA Index Name**	**Insert values -4 to 4. Highlight those > 2 or < 2.**	**Explain where significant the influence of high/low RCA indices on overall river condition**	**Highlight where indicators have changed**	**Identify why indicators have changed**
Bank Top					
B1	Bank top vegetation structure	2		3	Increase in vegetation structure on right bank due to proposed landscaping
B2	Bank top tree feature richness	0		0	
B3	Bank top water-related features	0		0	
B4	Bank top NNIPS cover	0		0	
B5	Bank top managed ground cover	-2		-2	
Bank Face					
C1	Bank face riparian vegetation structure	2		2	
C2	Bank face tree feature richness	1		1	
C3	Bank face natural bank profile extent	3	Abundance of natural bank profile types	3	
C4	Bank face natural bank profile richness	4	Diversity of natural bank profiles	4	
C5	Bank face natural bank material	1		1	
C6	Bank face bare sediment extent	1		1	
C7	Bank face artificial bank profile extent	0		0	
C8	Bank face reinforcement extent	-2		-2	
C9	Bank face reinforcement material	-2		-2	
C10	Bank face NNIPS cover	0		0	
Channel Margin					
D1	Channel margin aquatic vegetation	1		1	
D2	Channel margin aquatic morphotype	0		0	
D3	Channel margin physical feature extent	1		1	
D4	Channel margin physical feature	1		1	
D5	Channel margin artificial features	0		0	
Channel Bed					
E1	Channel aquatic morphotype richness	1		1	
E2	Channel bed tree features richness	1		1	
E3	Channel bed hydraulic features richness	0		0	
E4	Channel bed natural features extent	1		1	
E5	Channel bed natural features richness	1		1	
E6	Channel bed material richness	3	Diversity of channel bed materials	3	
E7	Channel bed siltation	0		0	
E8	Channel bed reinforcement extent	0		0	
E9	Channel bed reinforcement severity	0		0	
E10	Channel bed artificial features severity	0		0	
E11	Channel bed NNIPS extent	0		0	
E12	Channel bed filamentous algae extent	0		0	

River Condition Assessment Preliminary Score	0.802	River Type and Class Bands	K - Straight/sinuous, coarsest SA, average SI	River Condition Assessment Preliminary Score	0.854	River Type and Class Bands	K - Straight/sinuous, coarsest SA, average SI
Increase in score required to meet next condition class	0.398			Increase in score required to meet next condition class	0.346		
River Shape Index	1.537	Is the river channel **Overdeep**?	Yes	River Shape Index	1.537	Is the river channel **Overdeep**?	Yes
River Condition Assessment Final Class	Moderate	Is the final RCA class modified?	Yes	River Condition Assessment Final Class	Moderate	Is the final RCA class modified?	Yes
River Condition for Biodiversity Metric		**Fairly Poor**		**River Condition for Biodiversity Metric**		**Fairly Poor**	

Suggested enhancement interventions to improve river condition score	Suggested enhancement interventions to further improve river condition score
n/a	n/a
Notes	**Notes**

River Condition Assessment (RCA) Results for: Priority Rivers, Other rivers, Canals			
Site Name/Location	Land to the West of Tattenhall Road Tattenhall	Unique river section reference	Subreach W1.2
GPS of MoRPh5	SJ 48765 59215	Subreach length	76m

RCA River Type and Habitat Description for full river section

Type of Assessment		Baseline Assessment Results		Post development Assessment Results	
Condition Assessment Criteria		**RCA Index Values**	**Notes/Justification**	**RCA Index Values**	**Notes/Justification**
RCA Index ID	**RCA Index Name**	**Insert values -4 to 4. Highlight those > 2 or < 2.**	**Explain where significant the influence of high/low RCA indices on overall river condition**	**Highlight where indicators have changed**	**Identify why indicators have changed**
Bank Top					
B1	Bank top vegetation structure	2		2	
B2	Bank top tree feature richness	0		0	
B3	Bank top water-related features	0		0	
B4	Bank top NNIPS cover	0		0	
B5	Bank top managed ground cover	-3	Right bank intensive horse grazing	-2	Change to other neutral grassland
Bank Face					
C1	Bank face riparian vegetation structure	2		2	
C2	Bank face tree feature richness	2		2	
C3	Bank face natural bank profile extent	2		2	
C4	Bank face natural bank profile richness	4	Diversity of natural bank profiles	4	
C5	Bank face natural bank material	1		1	
C6	Bank face bare sediment extent	2		2	
C7	Bank face artificial bank profile extent	0		0	
C8	Bank face reinforcement extent	-2		-2	
C9	Bank face reinforcement material	-2		-2	
C10	Bank face NNIPS cover	0		0	
Channel Margin					
D1	Channel margin aquatic vegetation	1		1	
D2	Channel margin aquatic morphotype	2		2	
D3	Channel margin physical feature extent	1		1	
D4	Channel margin physical feature	2		2	
D5	Channel margin artificial features	0		-1	New pipe as a result of SUDS outflow
Channel Bed					
E1	Channel aquatic morphotype richness	1		1	
E2	Channel bed tree features richness	1		1	
E3	Channel bed hydraulic features richness	1		1	
E4	Channel bed natural features extent	2		2	
E5	Channel bed natural features richness	1		1	
E6	Channel bed material richness	2		2	
E7	Channel bed siltation	0		0	
E8	Channel bed reinforcement extent	0		0	
E9	Channel bed reinforcement severity	0		0	
E10	Channel bed artificial features severity	0		0	
E11	Channel bed NNIPS extent	0		0	
E12	Channel bed filamentous algae extent	0		0	

River Condition Assessment Preliminary Score	0.988	River Type and Class Bands	K - Straight/sinuous, coarsest SA, average SI	River Condition Assessment Preliminary Score	0.988	River Type and Class Bands	K - Straight/sinuous, coarsest SA, average SI
Increase in score required to meet next condition class	0.212			Increase in score required to meet next condition class	0.212		
River Shape Index	2.121	Is the river channel **Overdeep**?	Yes	River Shape Index	2.121	Is the river channel **Overdeep**?	Yes
River Condition Assessment Final Class	Moderate	Is the final RCA class modified?	Yes	River Condition Assessment Final Class	Moderate	Is the final RCA class modified?	Yes
River Condition for Biodiversity Metric		**Fairly Poor**		**River Condition for Biodiversity Metric**		**Fairly Poor**	

Suggested enhancement interventions to improve river condition score	**Suggested enhancement interventions to further improve river condition score**
n/a	n/a
Notes	**Notes**

Appendix D: Condition Score Classes

Table 3: Likely best and worst Preliminary Condition Scores for each River Type and lower threshold values for allocating Preliminary Condition Scores to Final Condition Classes (Good – 3; Fairly Good – 2.5; Moderate – 2; Fairly Poor – 1.5; Poor – 1).

River Type	Canals and Navigable rivers	Large rivers	A	B	C	D	E	F	G	H	I	J	K	L	M
Likely best Provisional Condition Score	1.8	2.2	2.4	2.7	2.7	2.7	2.7	2.8	3.0	2.9	3.1	2.8	2.4	2.4	2.4
Lower threshold for GOOD	>1.4	>1.8	>1.9	>2.2	>2.2	>2.2	>2.2	>2.3	>2.5	>2.4	>2.5	>2.3	>1.9	>1.9	>1.9
Lower threshold for FAIRLY GOOD	>0.9	>1.3	>1.2	>1.4	>1.4	>1.4	>1.4	>1.5	>1.6	>1.6	>1.7	>1.5	>1.2	>1.2	>1.2
Lower threshold for MODERATE	>0.3	>0.5	>0.2	>0.2	>0.2	>0.2	>0.2	>0.4	>0.5	>0.5	>0.6	>0.4	>0.2	>0.2	>0.2
Lower threshold for FAIRLY POOR	>-0.5	>-0.4	>-1.0	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.9	>-0.8	>-0.9	>-1.0	>-1.0	>-1.0
Likely worst Provisional Condition Score	-1.5	-1.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5	-2.5

Gurnell, A., England, J., Scott, S., and Shuker, L. (2024) A Guide to Assessing River Condition. Part of the Rivers and Streams Component of the Biodiversity Net Gain Metric.

Appendix E: Example Post Development Interventions

Riparian strips

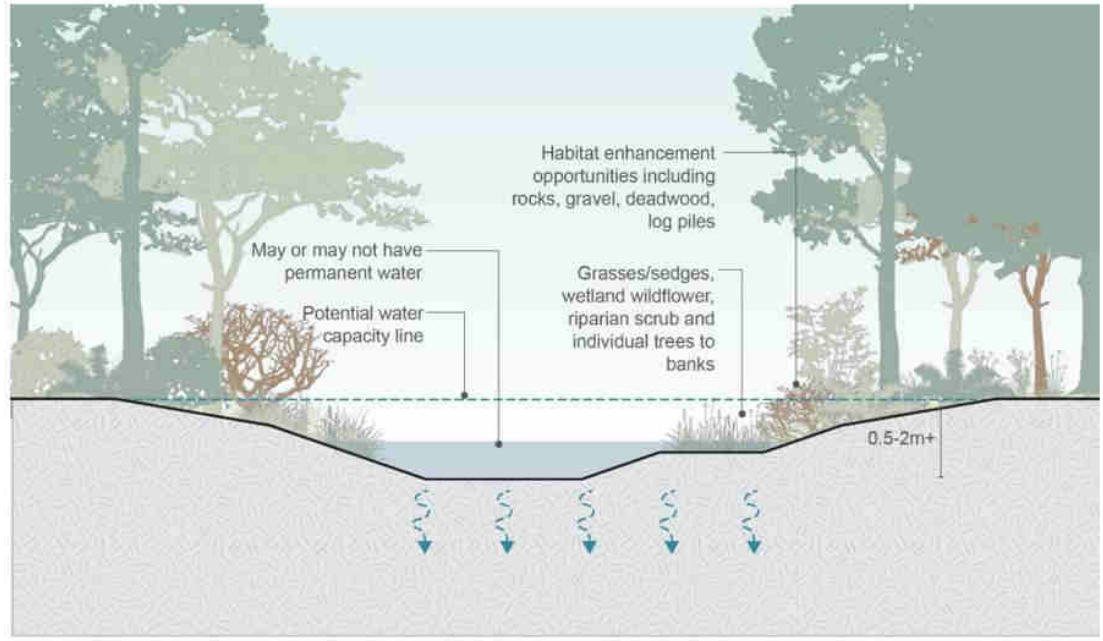


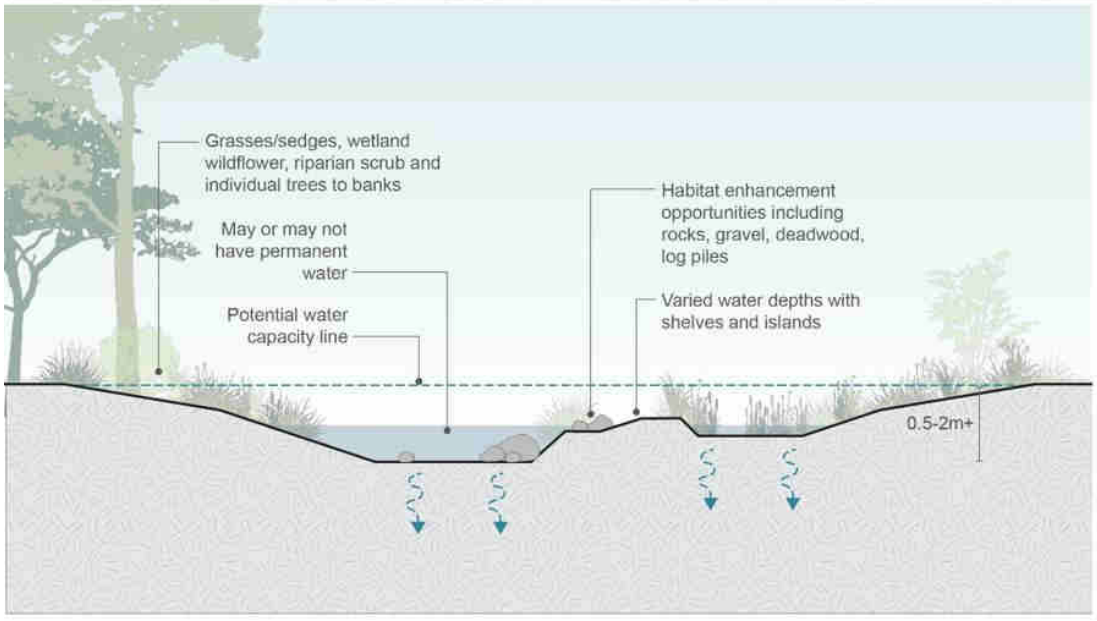
Source: TEP 2026

Vegetated, uncultivated zones **at least 10m wide**, along the bank tops of rivers. Riparian strips (also known as riparian buffers) can provide multiple benefits including:

- Trapping and filtering nutrients, sediments, pesticides and other pollutants.
- Providing Natural Flood Management (NFM) services by slowing overland flow and increasing infiltration.
- Creates a biodiversity corridor, providing habitat, food and shelter for wildlife.
- Stabilising river banks which helps to prevent erosion and increased siltation of channels.
- Providing a degree of shading, which is beneficial for aquatic life.
- A mix of diverse, native grasses, shrubs and trees offers the greatest benefit.

Wet Woodland





Wet woodlands are typically found on floodplains and characterised by willows, birches, and alder that thrive in poorly drained or seasonally flooded soils.

The diverse woodland structure can attenuate flood water flows, regulating the severity of flood events; and provide corridors of hugely rich habitat for a range of unique animal, plant and fungal communities.

Wet woodlands can deliver further ecosystem services providing water purification, filtering and trapping pollutants; and overtime, peat accumulating from tree and other plant biomass can form belowground carbon stores.

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Annex C: Condition Assessments

Baseline

Site Name: Tattenhall Road, Tattenhall, Cheshire
Metric Version: Statutory Metric
Date of Survey: 01/05/2026

Habitats

			Criteria												
Habitat/area	**Metric Classification**	**Condition**	**A**	**B**	**C**	**D**	**E**	**F**	**G**	**H**	**I**	**Number of Passes**	**Score**	**Essential Criteria**	**Limitations/Notes**
Modified Grassland	Grassland - Modified grassland	Poor	FAIL Max of 5 species per sq m and no forbs on average	FAIL Sward height approx 1-2cm as heavily grazed.	PASS No scrub present.	FAIL More than 5% physical damage.	PASS Small patch of bare ground.	PASS No bracken on site.	PASS No invasives found on site			4		A - Fail	
Ephemeral Pond	Lakes - Ponds (non-priority habitat)	Moderate	PASS Pond contained clear water	FAIL surrounded by modified grassland	PASS No duckweed present	PASS Pond is standalone and not connected	PASS Pond levels naturally fluctuate throughout the year.	PASS No non natives present.	PASS No fish present in pond.	FAIL No submerged or emergent plants in the pond.	PASS No shade from trees and scrub	7			
Bunded bank	Sparsely vegetated land - Ruderal/Ephemeral	Poor	FAIL Vegetation structure all one level.	FAIL Mainly composed of nettle and bramble	PASS No invasives present							1			
Stable yard	Urban - Developed land; sealed surface	N/A										0			Developed land consisting of hardstanding with stables and associated buildings
Trees	Individual trees – Rural tree	Good	PASS Trees are native	PASS Tree canopies are all continuous.	PASS Trees are mature.	PASS No evidence of adverse impacts on trees.	PASS All trees have ecological niches present.	PASS More than 20% is oversailing				6			

Creation

Site Name: Tattenhall
Metric Version: Statutory Metric

Habitats

Landscape Masterplan Classification	Metric Classification	Condition Criteria Sheet Used	Condition Targeted	Criteria Targeted A	B	C	D	E	F	G	H	I	J	K	L	M	Number of Passes	Score	Essential Criteria	Tree Size	Limitations/Notes
Amenity green space	Grassland - Modified grassland	Grassland Low distinctiveness	Poor	FAIL species mix only likely to achieve 2-5 species per sq/m.	FAIL Sward height likely to be regularly mown and uniform	PASS No scrub likely to be present	FAIL Pedestrian areas so damage risk high	FAIL unlikely to be any bare ground when grown	PASS No bracken in species mix	PASS No invasives present in grass mix							3		A - Fail		
Natural/Semi-natural green space	Grassland - Other neutral grassland	Grassland Medium/High/Very High distinctiveness	Moderate	PASS overseed to increase diversity and create recognisable ONG habitat	PASS grassland management will be needed to create diverse sward height	PASS Bare ground can be created and maintained through management	PASS Bracken and scrub will be mnaged and kept below 20% and 5% cover respectively	PASS Management will ensure sub-optimal species, invasives and damage will be kept to a minimum	FAIL Management will work towards achieving 10sp/m2, but on a precautionary basis, this criterion is assumed to be failed								5		A - pass & F - fail		
Wildlife pond	Lakes - Ponds (non-priority habitat)	Ponds	Moderate	PASS water quality will be good	FAIL Surrounding habitat is grassland with trees, less than 10m.	PASS Assume less than 10% due to pond being new.	PASS Will not be connected to other waterbodies.	PASS Pond will be allowed to naturally fluctuate.	PASS no non natives will be introduced.	PASS No fish will be introduced.	PASS Aquatic plants will be planted at the margins.	PASS Pond will not be more than 50% shaded.					8				All criteria targeted except B which would give good condition, but assigned moderate condition on a precautionary basis
Allotments	Urban - Allotments	Urban	Moderate	PASS Vegatation structure will be varied.	FAIL Nectar bearing plants will need to be considered, precautionary fail.	PASS No non native invasives to be planted.											2				
Developed land	Urban - Developed land; sealed surface	N/A	N/A																		Condition automatically applied
Drainage attenuation with wetland meadow	Urban - Sustainable drainage system (SuDS)	Urban	Moderate	FAIL Vegetation structure may not be varied, precautionary fail.	PASS Differing plant species will need to be planted that are beneficial to wildlife.	PASS No non native invasives will be introduced.	E1: PASS Native species will need to be planted	E2: PASS Wetland/riparian plant species will need to be considered									4				
Woodland planting	Woodland and forest - Other woodland; broadleaved	Woodland	Poor	1	3	3	3	3	3	1	3	1	1	1	1	1		24			A - Will be newly planted. B - No browsing present. C - No invasives will be planted. D - Encourage 5 or more species. E - All should be native species. F - approx 40% open space due to it being newly planted. G - All newly planted so no regrowth. H - all trees should be in good condition. I - No recognisable nvc community. J - Newly planted so one storey. K - No veteran trees present. L - No deadwood. M - less than 1ha predicted
Tree planting (in open space)	Individual trees – Urban tree	Individual trees	Moderate	PASS Will be newly planted in open space so likely to be all natives.	PASS Individual trees.	FAIL Newly planted so unlikely to reach maturity in 30 years	PASS Limited damage anticipated	FAIL No ecological niches.	PASS >20% will oversail vegetation								4			Small	
Gardens within development parcels	Urban - Vegetated garden	N/A	N/A																		Condition automatically applied
Tree planting (in streets)	Individual trees – Urban tree	Individual trees	Poor	FAIL Will be newly planted street trees, so likely to be ornamental species.	PASS Individual trees.	FAIL Newly planted so unlikely to reach maturity in 30 years	FAIL damage could occur due to being street trees	FAIL No ecological niches.	FAIL <20% will oversail vegetation								2			Small	

Drawings and Plans

Drawing 1: G11425.005 Baseline UK Habitats

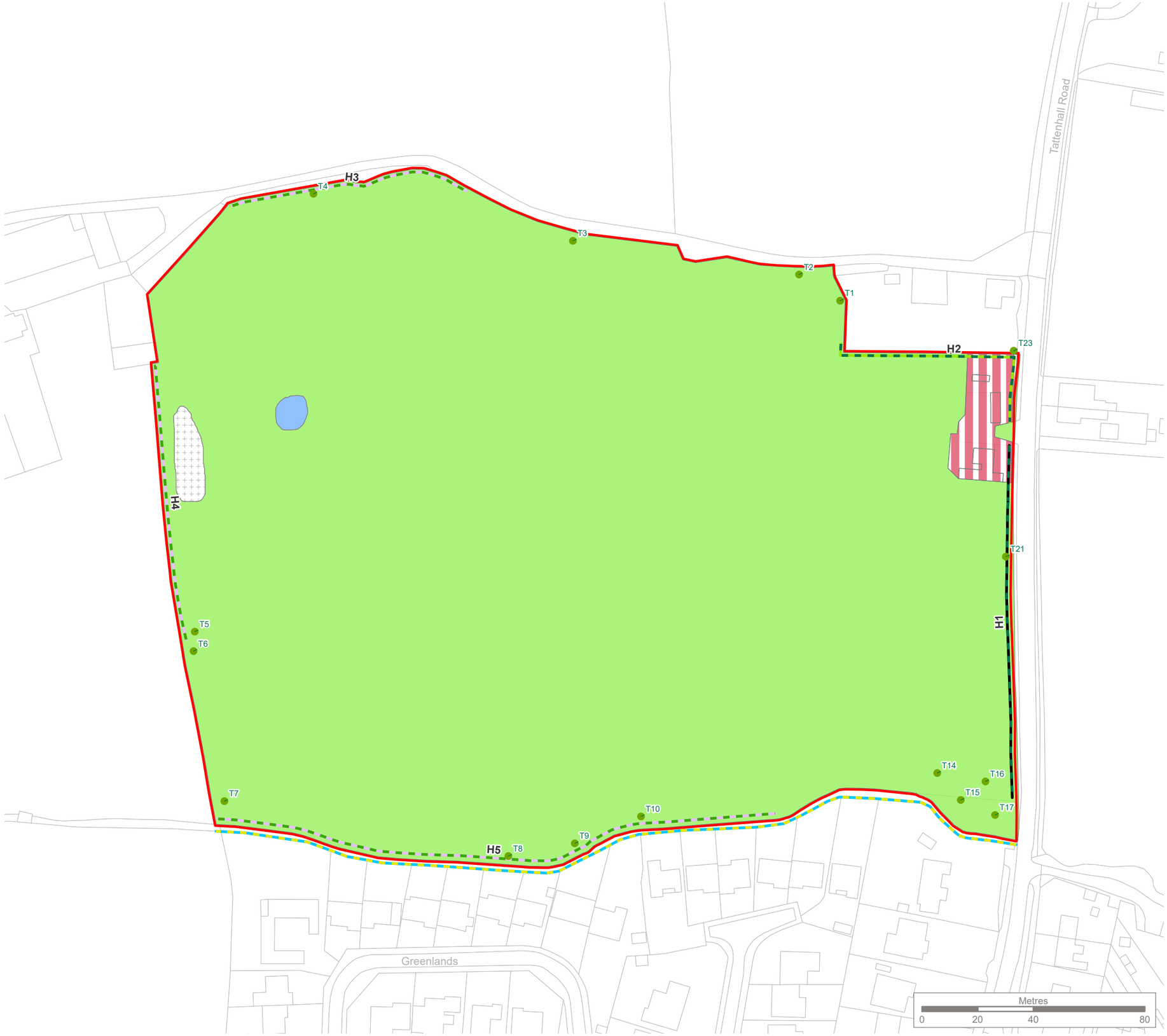
Drawing 2: G11425.011 Baseline Condition and Strategic Significance

Drawing 3: G11425.013 Proposed Habitats

Drawing 4: G11425.014 Proposed Condition and Significance

Drawing 5: G11425.012 Habitat Impact

Drawing 6: PS10797.002D Development Framework Plan



KEY

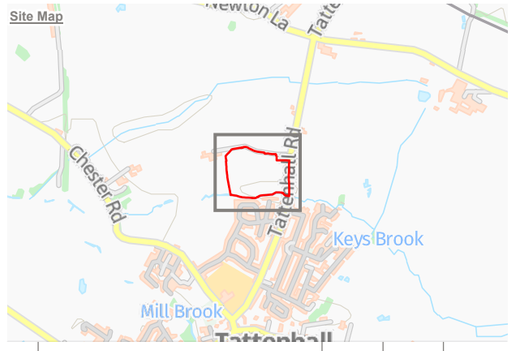
- Site boundary
- Rural tree
- Species-rich native hedgerow
- Native hedgerow
- Species-rich native hedgerow with trees
- Other river and stream
- Modified grassland
- Ponds (non-priority habitat)
- Ruderal/ephemeral
- Developed land, sealed surface

Note:
The locations of habitats and habitat features are indicative.

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Site Map



Rev	Description	Drawn	Approved	Date

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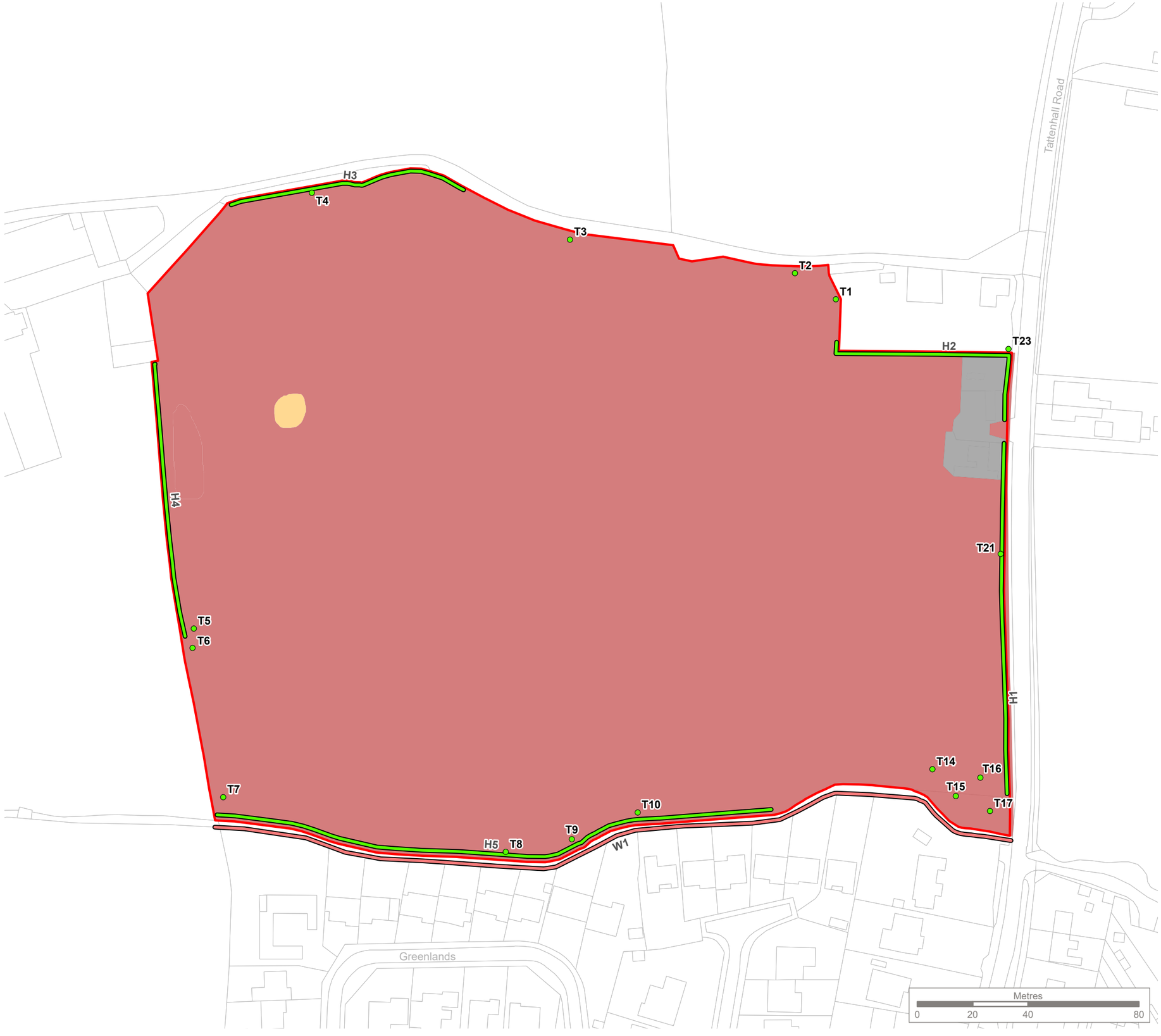
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Tel 01925 844004 e-mail tep@tep.uk.com www.tep.uk.com

Project
Tattenhall Road, Tattenhall

Title
Baseline UK Habitats

Drawing Number
G11425.005

Drawn	Checked	Approved	Scale	Date
BJ	HP	SV	1:1,400 @ A3	30/09/2026



KEY

Site boundary

Individual Tree Condition

Good

Linear Features Condition

Good

Fairly Poor

Habitat Condition

Moderate

Poor

Not applicable - other

Strategic Significance

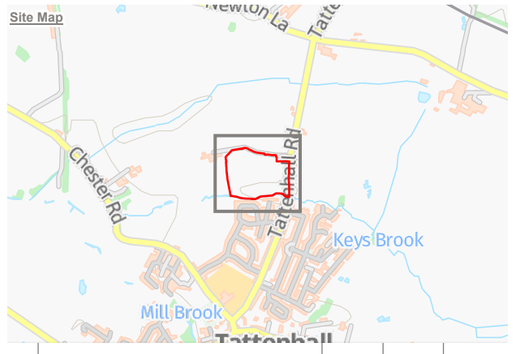
All habitats with strategic significance value of 'area/ compensation not in local strategy/no local strategy'.

Note:
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Tattenhall Road, Tattenhall

Title
Baseline Habitat Condition and Strategic Significance

Drawing Number
G11425.011

Drawn	Checked	Approved	Scale	Date
OH	MK	SV	1:1,400 @ A3	30/09/2026



KEY

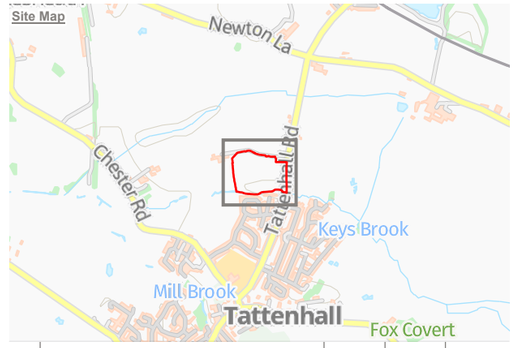
- Site boundary
- Rural tree
- Urban tree
- Native hedgerow
- Species-rich native hedgerow
- Species-rich native hedgerow with trees
- Modified grassland
- Other neutral grassland
- Ponds (non-priority habitat)
- Other woodland, broadleaved
- Allotments
- Developed land, sealed surface
- Sustainable drainage system

Note:
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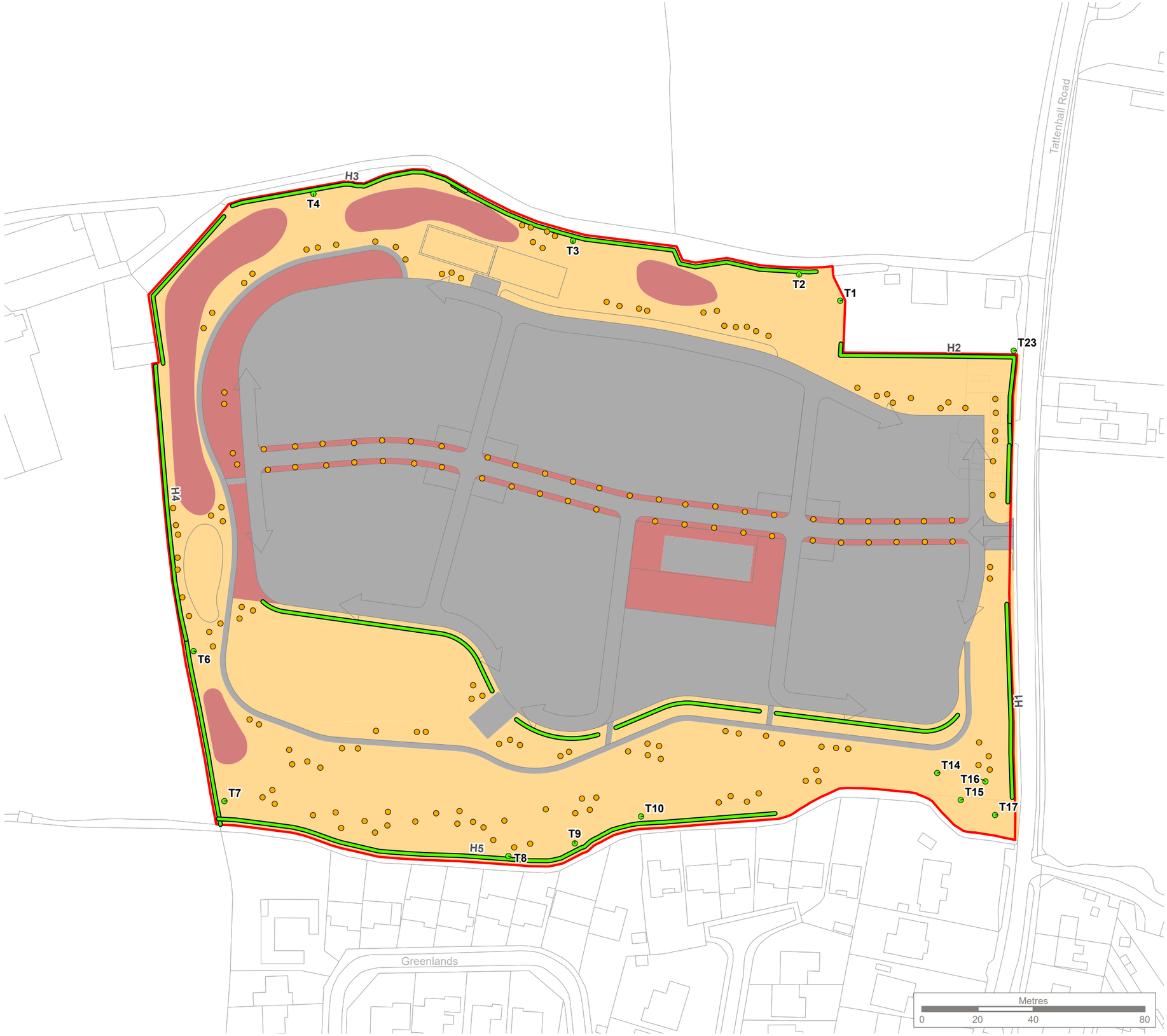
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Project
Tattenhall Road, Tattenhall

Title
Proposed Habitats

Drawing Number
G11425.013

Drawn	Checked	Approved	Scale	Date
MK	BJ	SV	1:1,400 @ A3	30/09/2026



KEY

Site boundary

Individual Tree Condition

Good

Moderate

Linear Features Condition

Good

Habitat Condition

Moderate

Poor

Not applicable - other

Existing watercourse with strategic significance value of 'formally identified in local strategy'

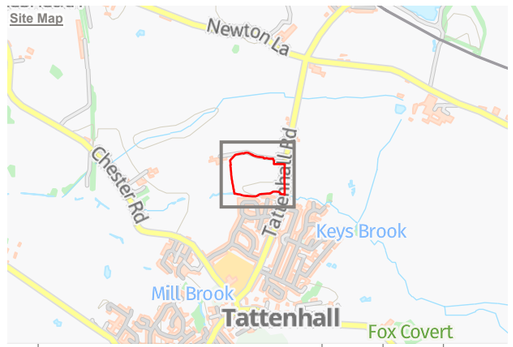
All other habitats with strategic significance value of 'area/compensation not in local strategy/no local strategy'

Note:
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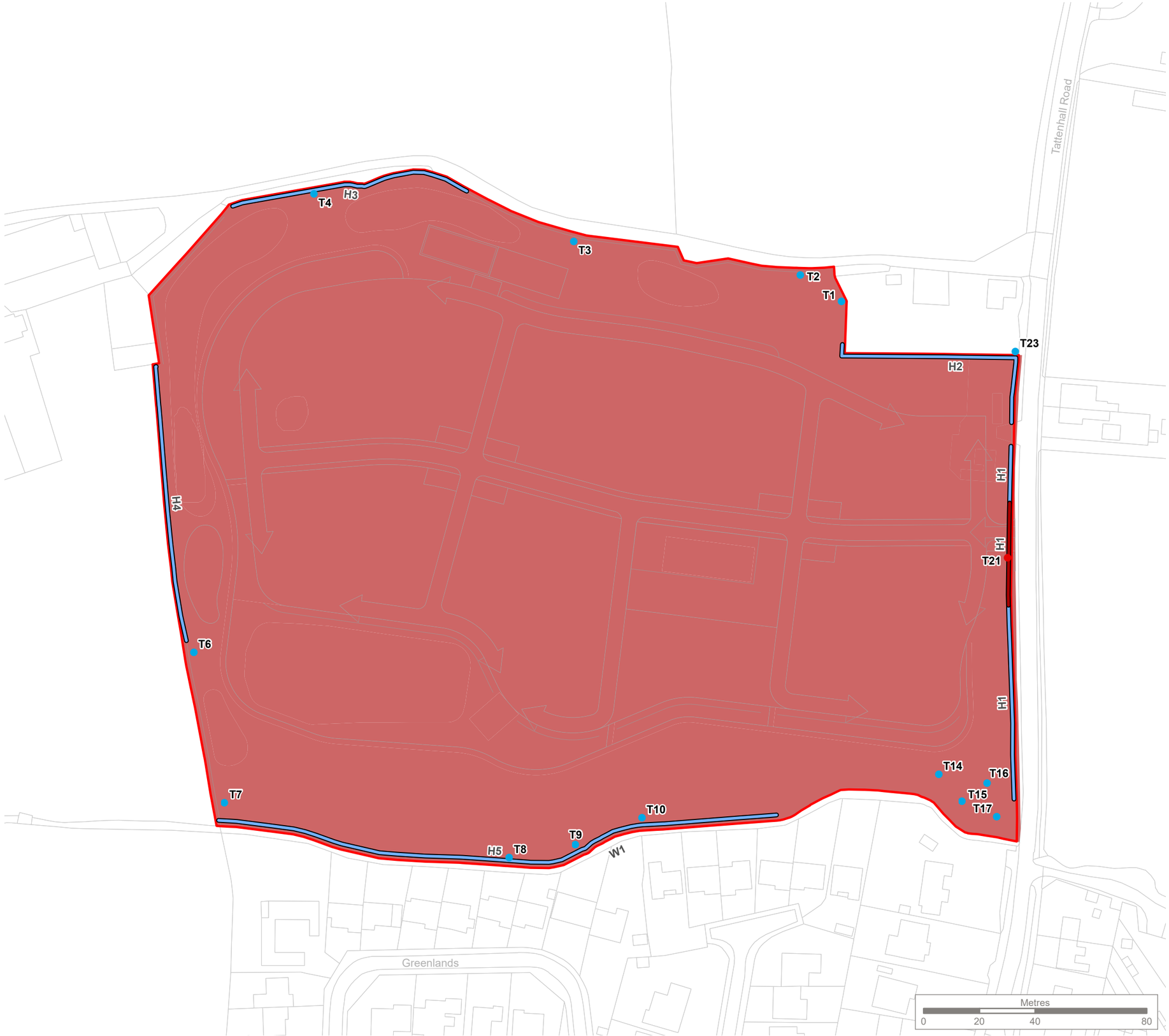
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Project
Tattenhall Road, Tattenhall

Title
Proposed Condition and Strategic Significance

Drawing Number
G11425.014

Drawn	Checked	Approved	Scale	Date
MK	BJ	SV	1:1,400 @ A3	30/09/2026



KEY

Site boundary

Individual Tree Impact

Retained

Lost

Hedgerow Impact

Retained

Lost

Habitat Impact

Lost

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Project
Tattenhall Road, Tattenhall

Title
Habitat Impact

Drawing Number
G11425.012

Drawn	Checked	Approved	Scale	Date
MK	BJ	SV	1:1,400 @ A3	30/09/2026

1. Residential development area
2. Vehicular access from Tattenhall Road with new pedestrian crossing
3. Area for drainage attenuation including wetland meadow grassland and marginal planting to enhance biodiversity
4. Wildlife pond with marginal aquatic planting as a replacement pond twice the size as original
5. Development set back approximately 20m from the western and northern boundaries with native tree and woodland planting and naturalistic open space to buffer the development, provide a wildlife corridor and form a new attractive settlement edge
6. Informal pedestrian routes at the site edges for recreation
7. High Voltage 11kV Overhead Cables Diverted / Undergrounded
8. East-west green link inspired by the local green spaces in Tattenhall including central amenity open space, play area and opportunity for feature buildings
9. Allotments with parking provision
10. New native species rich hedgerow planting and native hedgerow trees to site boundaries connecting to the existing hedgerows
11. Semi natural open space along the brook with native tree planting and opportunities for wildlife and recreation
12. Pedestrian connection up to boundary

Greaves Farm Cottage
Greaves Farm
Greaves Meadow Barns
Greaves Cottage
TATTENHALL ROAD
GREENLANDS
GREENLANDS
TATTENHALL ROAD

Key

Existing

- Application Boundary (6.32ha)
- Trees
- Hedgerow
- Waterbody/Watercourse
- High Voltage 11kV Overhead Cables
- Overhead Cables

Proposed

- Vehicle Access
- Residential Development Area (3.11ha) Up to 110 dwellings at 35dph
- Key Nodal Space
- Amenity Green Space (0.35ha)
- Natural/Semi Natural Greenspace with Meadow Grassland incl. Drainage (2.81ha)
- Drainage Attenuation with Wetland Meadow
- Allotments With Parking Provision (0.05ha)
- Woodland Planting
- Tree Planting
- Hedgerow Planting (native species-rich)
- Wildlife Pond
- Footpath
- Play Space
- Foul Pumping Station

0 20 40 60 80 100m

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Aerial: Maxar, Microsoft

Rev	Description	Drawn	Approved	Date
D	Flood zone updated in line with EA consultation	SO	NKH	26/11/25
C	Updated internal roads, planting and drainage	EL	NKH	15/05/25
B	Updated drainage	EL	NKH	27/03/25
A	Updated layout in line with client comments	EL	NKH	13/03/25

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Project
Land West of Tattenhall Road, Tattenhall

Title
Development Framework Plan

Drawing Number
PS10797.002D

Drawn	Checked	Approved	Scale	Date
AL/EL	NKH	NKH	1:2,000 @ A3	12/02/2025

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