



Ecological Impact Assessment

Marsden Island

CS District Ltd

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Ecological Impact Assessment

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Non-Technical Summary

- i. In March 2025 Enzygo Ltd was commissioned by CS District Ltd (the Client) to undertake an Ecological Impact Assessment (EclA) of Marsden Island, Cellars Clough, Marsden, HD7 6LY (central grid reference SE 05852 12535), located within the Kirklees Metropolitan Council planning authority. This study will inform proposals for a residential development.
- ii. The following key ecological features and associated recommendations have been identified:
 - **South Pennine Moors Phase 2 SPA, South Pennine Moors SAC and SSSI, Peak District Moors (South Pennine Moors Phase 1) SPA, and Dark Peak SSSI** – *(Several statutorily designated nature conservation sites in the wider area, and site lies within Impact Risk Zone in which the LPA are advised to consult Natural England)* – Considering the nature and location of the proposed development in relation to the designated sites, all pathways for potential impacts are reasonably discounted, with the exception of potential transport-related air quality impacts. Further technical assessment is required to screen out potential impacts. At the discretion of the Planning Officer, Natural England to be consulted to conform the assessment of impacts presented here;
 - **Lowland Mixed Deciduous Woodland HPI, Hedgerow HPI and Green Infrastructure** – *(Lowland Mixed Deciduous Woodland HPI adjacent on the southern boundary. Other Native Hedgerow HPI found along part of the northern and southern boundary)* – The final layout has been sensitively designed to enable the retention and protection of hedgerows and trees. The construction phase will implement measures to protect Lowland Mixed Deciduous Woodland HPI and Hedgerow HPI, and both the construction and operational phases will implement a sensitive lighting scheme to minimise potential habitat degradation;
 - **Huddersfield Narrow Canal LWS, Blue Infrastructure and Riparian Fauna** – *(Cellars Clough reservoir immediately adjacent to the west, River Colne adjacent to the south, Huddersfield Narrow Canal LWS 5m north of the site, and watercourse course present in the west of the proposed site provide blue infrastructure and wildlife corridor function. The eDNA results were negative for all three watercourses for both Water Vole and White-clawed Crayfish. Watercourses and waterbodies may provide limited opportunities for Otter although no evidence of presence identified)* – The final site layout has been sensitively designed to enable to the protection of all watercourses and the retention of the onsite stream with an appropriate protective buffer. A sensitive lighting scheme will also be implemented to avoid potential habitat degradation. Site works to be undertaken in accordance with best practice and through the adoption of the appropriate Environmental Agency pollution prevention guidance. No further survey for any potentially associated riparian fauna is deemed proportionate or justified;
 - **Reedbed HPI** – *(Reedbeds HPI present in the west of the site, abutting part of the northern boundary of the existing onsite watercourse)* – The final layout has been sensitively designed to enable the retention and protection of Reedbed habitat. As above, the construction phase will implement measures to protect Reedbed HPI, and both the construction and operational phases will implement a sensitive lighting scheme to minimise potential habitat degradation;

- **Bats** – (*Habitats including hedgerow with trees provide limited suitable bat foraging and commuting habitat. Adjacent Lowland Mixed Deciduous Woodland HPI and watercourses provide further bat foraging and commuting habitat for local bats. No potential roosting habitat present on site*) – The recommendations above for protection of onsite hedgerow and trees, and adjacent woodland and watercourses including implementing sensitive lighting, will retain the majority of suitable habitats for foraging and commuting bats at the site. Further Bat Activity Surveys are not deemed necessary or appropriate given the size and location of the site and considering the nature of the sensitively designed site layout;
 - **Badger** – (*No evidence of presence, however limited extent of suitable habitat present onsite and adjacent to the site including scrub, grassland and woodland*) – Pre-commencement Badger Check recommended prior to the construction phase. Reasonable avoidance measures during construction are also required;
 - **Nesting Birds** – (*Hedgerow with trees, reedbeds and scrub provide a limited extent of nesting potential for a restricted range of bird species onsite*) - Vegetation clearance to be conducted outside of the nesting season, or if necessary within the nesting season, an Ecological Clerk of Works (ECoW) to advise and supervise works to ensure no active nests to be affected. No further pre-determination Breeding Bird Surveys are proportionate or justified in this instance;
 - **Great Crested Newt** – (*No ponds identified onsite and all ponds within a 500m radius of the site beyond complete physical barriers of dispersal to the site. Site includes grassland, hedgerow and rubble piles serving as limited suitable terrestrial habitat*) - Implement best practice precautionary measures to minimise the risk of accidental injury/killing of any GCN found during the construction phase. Considering the notably low risk of GCN presence and associated killing/injury during construction, it is not considered any further predetermination survey or Natural England licensing is proportionate or justified in this instance;
 - **Common Reptiles and Priority Species** – (*The majority of the site supports vacant sparsely vegetated land and recently disturbed land of negligible suitability for common reptiles and other notable species such as common amphibians and small mammals. However, the site includes localised areas of grassland, scrub, reedbed and hedgerow with trees which provide limited habitat for foraging, refuge and shelter for common reptiles and priority species*) – Habitats to be cleared in a sensitive manner under the supervision of an ECoW. No further detailed Reptile survey deemed proportionate or justified in this instance; and
 - **Invasive Species** – (*Indian Balsam and Rhododendron identified onsite in the PEA walkover, with further Indian Balsam encroaching from the east. Japanese Knotweed was also identified along the north bank of the River Colne during the MoRPh RCA survey*) – An invasive species contractor will advise on an appropriate treatment and eradication plan.
- iii. Proposals present opportunities for biodiversity enhancement in order to provide net gains for biodiversity in accordance with national and local policies through providing enhanced opportunities for nesting birds, roosting bats, other priority species, and landscape planting.
- iv. Subject to the findings of a separate technical Air Quality Road Emissions Screening Assessment, this report has demonstrated that, if the outlined mitigation measures are implemented in full and assuming a sensitive final site layout, no significant residual impact

could be expected, and the proposed application will result in 'no net loss in biodiversity,' whilst also providing opportunities for 'biodiversity net gain' in accordance with NPPF and Local Planning Policy.

1.0 Introduction

1.1 Commission

- 1.1.1 In March 2025 Enzygo Ltd was commissioned by CS District Ltd (the Client) to undertake an Ecological Impact Assessment (EclA) of Marsden Island, Cellars Clough, Marsden, HD7 6LY (central grid reference SE 05852 12535), located within the Kirklees Metropolitan Council planning authority. This study will inform proposals for a residential development.
- 1.1.2 Note: Enzygo Ltd are not considered to act as a Principal Designer for any mitigation/enhancement strategies identified within this document in accordance with the Construction (Design and Management) Regulations 2015 (CITB, 2016).

1.2 Proposed Development/Identification of Impacts

- 1.2.1 The study will inform proposals for a residential development, with associated parking and access from Manchester Road. Dwellings will be developed in the centre of the site, with associated landscaping and hardstanding. Refer to Appendix A for a plan of the proposals.
- 1.2.2 It is assumed no land outside of the redline boundary will be used as a construction compound etc. during the construction phase. A corresponding zone of influence has been considered (this includes any transboundary effects regardless of administrative areas). This assessment considers potential impacts associated with site clearance, drainage, artificial lighting and transport-related air quality issues, with potential impacts associated with noise and recreational impacts discounted.

1.3 Aims and Objectives

- 1.3.1 The purpose of this report is to provide biodiversity information which succinctly identifies ecological features on site and within the corresponding zone of influence, confirms potential impacts resulting from the proposals, associated effects to ecological features, outlines proportionate avoidance, mitigation and compensation strategies, and identifies enhancements that can be implemented in accordance with the British Standard for Biodiversity BS42020:2013 (BSI, 2013) to demonstrate 'no net loss in biodiversity' and to 'provide net gains for biodiversity' in accordance with NPPF and Local Planning Policy.
- 1.3.2 This report has been produced with reference to current Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017a), Guidelines for Ecological Impact Assessment in the UK and Ireland, Terrestrial, Freshwater, Coastal and Marine (CIEEM, 2018), Guidelines for Ecological Report Writing (CIEEM, 2017b), Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edn) (Collins, 2023), and British Standard BS42020:2013 (BSI, 2013).

1.4 Background/Acknowledgments

- 1.4.1 A search of the Kirklees Council planning website identified multiple applications associated with the site. In May 2006 an application was submitted for a *"Conversion of Mills 1, 2 & 3 to apartments, demolition of Mill 4 and erection of new apartment block, demolition of other and two storey buildings and erection of apartment and car parking block, surface car parking, landscaping and improvements to access and access road (168 apartments in total)"* (application reference 2006/62/92095/W1). No ecological reports were submitted as part of this application. This application was withdrawn in December 2006.
- 1.4.2 A November 2006 application for *"Use of basement and part of ground floor of residential dwelling for holistic therapies and computer programming business"* (planning reference

2006/62/94946/W1) for The Old Coach House located approximately 60m south east of the site. This application was approved in January 2007. No ecological reports were submitted as part of this application.

- 1.4.3 An application for *“Conversion of mills 1, 2, 3 and 4 and former offices to 101 dwelling units, 9 live/work units, residents’ gym, pool, shop, meeting room and bike store. Demolition of other buildings. Car parking and landscaping improvements to access road”* (planning reference 2007/62/93456/W1) was submitted in August 2007 and approved with conditions in November 2008. This application included an Ecological Assessment (Ecology Services UK Ltd., 2007) and Bat Survey (Ecology Services UK Ltd., 2008).
- 1.4.4 In January 2008 an application for *“Erection of Bat Barn”* (planning reference 2008/62/90271/W1) was submitted approximately 30m south of the site, with conditional full permission granted in May 2008. No ecological reports were submitted for this application.
- 1.4.5 In November 2008 an application for *“Erection of single storey extension”* (planning reference 2008/62/94114/W1) was submitted for The Old Coach House, and refused in January 2009. No ecological reports were submitted for this application.
- 1.4.6 An additional application for The Old Coach House was submitted in November 2008 for *“Erection of solar panel support structure over lower ground floor area”* (planning reference 2008/62/94113/W1), though the application was considered invalid in January 2009. No ecological reports were submitted for this application.
- 1.4.7 In January 2009, an application for *“Erection of extension to lower ground floor basement area with solar panels supported on the roof”*. Conditional full permission was granted in March 2009. No ecological reports were submitted for this application.
- 1.4.8 In July 2011 an application for *“Extension to time limit to implement existing permission no.2007.62.93456/W1 for conversion of mills 1, 2, 3 & 4 and former offices to 101 dwelling units, 9 live/work units, residents’ gym, pool, shop, meeting room and bike store. Demolition of other buildings. Car parking & landscaping improvements to access road”* (application reference 2011/62/91795/W). An extension was granted in October 2011. No ecological reports were submitted for this application.
- 1.4.9 In January 2013 an application for *“Alterations for existing mill and erection of extension to form 133 apartments, formation of associated parking for 190 cars, part demolition of part of existing complex and construction of a new access road with improvement of the site access off Manchester Road”* (planning reference 2013/62/90037/W). No ecological reports were submitted as part of this application – though a consultation response from Kirklees Council Environment Unit in February 2013 noted the likelihood of invasive plant species, further bat survey and mitigation required, and mitigation and ecological enhancements for birds (Kirklees Council, 2013). This application was withdrawn in February 2014.
- 1.4.10 An application at The Old Coach House was submitted in September 2013 for *“The proposal is for a single storey rear extension. The extension projects 5.975m beyond the rear wall of the original dwellinghouse. The maximum height of the extension is 3.55m. The height of the eaves of the extension is 2.0m”* (planning reference 2013/HHPD/92956/W). This application was withdrawn in October 2013. No ecological reports were submitted for this application.
- 1.4.11 In November 2013 an application for *“Change of use to convert ancillary accommodation to separate dwellinghouse”* was submitted for The Old Coach House. No ecological reports were submitted as part of this application. Conditional full permission was granted in January 2014.

- 1.4.12 In May 2016 an application for the site for *“Demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2016/62/91573/W) was submitted for the site. This application included An Ecological Impact Assessment including an updated Bat Survey (Quants, 2018). This proposal was approved with conditions in June 2019.
- 1.4.13 In July 2017 an application for *“Certificate of lawfulness for proposed use of a dwelling (C3) as a residential home for up to young adults”* (planning reference 2017/CLD/92579/W) was submitted for Cellars Clough House located approximately 115m south east of the site. No ecological reports were submitted for this application. Certificate of lawful use was granted in September 2017.
- 1.4.14 In August 2018 an application for *“Change of use from existing dwelling (C3) to wellbeing and lifestyle retreat and guest house (C1) with training area (D1)”* (planning reference 2018/62/92767/W) was submitted for The Carriage House approximately 35m south east of the site. No ecological reports were submitted for this application. Conditional full permission was granted in November 2018.
- 1.4.15 An application for *“Discharge of conditions 3, 4, 8, 11, 16, 17, 21, 23, 24 and 38 of previous application 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2019/44/92324/W) was submitted in July 2019, relating to 1.4.12 of this report. This application included a Construction Environmental Management Plan (CEMP) (Quants, 2019) to discharge condition 8. A consultation response from the Biodiversity Officer of Kirklees Council Ecology in December 2019 stated there was no objection to the discharge of this condition (Kirklees Council, 2019a). This was then confirmed in a decision letter in December 2019 (Kirklees Council, 2019b).
- 1.4.16 Further applications in July 2019 for *“Discharge of conditions 18,19,20,25,26,28,29,30,32 & 33 on previous application 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2019/44/92323/W) and October 2019 for *“Discharge of conditions 13 (stair location), 14 and 15 (wall survey and maintenance report) of previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2019/44/93226/W) were submitted relating to 1.4.12 of this report. No ecological reports were submitted as part of this proposal. A split decision on the discharge of conditions was reached in September 2020.
- 1.4.17 An application for *“Variation of conditions 24, 25, 26, 28 and 30 of previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2020/70/90809/W) was submitted in March 2020 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. In May 2021 a Section 106 was decided.
- 1.4.18 An application for *“Discharge conditions 17, 21, 32, 33 on previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2020/44/91959/W) was submitted in June 2020 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. A split decision was reached in November 2020.
- 1.4.19 An application for *“Discharge of conditions 18 (foul, surface water and land drainage), 19 (flood Risk), 20 (temporary surface water drainage) and 29 (access to the site for construction traffic) of previous permission 2016/91573 for the demolition of existing redundant mill buildings and*

erection of 55 dwellings with associated parking and access from Manchester Road” (planning reference 2021/44/92303/W) was submitted in June 2021 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. A split decision was reached in July 2021.

- 1.4.20 An application for *“Discharge of conditions 18 and 20 (drainage) of previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2022/44/90904/W) was submitted in March 2022 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. The discharge of these conditions was approved in August 2022.
- 1.4.21 An application for *“Discharge of conditions 18 (drainage), 19 (storm events) and 20 (surface water) of previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2022/44/91461/W) was submitted in April 2022 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. This application was withdrawn in March 2023.
- 1.4.22 An application for *“Variation condition 2 (plans) on previous permission 2016/91573 for demolition of existing redundant mill buildings and erection of 55 dwellings with associated parking and access from Manchester Road”* (planning reference 2022/70/93041/W) was submitted in September 2022 and relating to 1.4.12 of this report. No ecological reports were submitted as part of this application. In August 2023 a Section 106 was decided.
- 1.4.23 In August 2023 an application for *“Erection of single storey side extension with terrace above and associated alterations”* (planning reference 2023/62/92557/W) was submitted. No ecological reports were submitted as part of this application. In November 2023 conditional full permission was granted.
- 1.4.24 It is our understanding that to date, there have been no known discussions regarding ecology with the LPA/County Ecologist/third party consultees (e.g. EA or Natural England) for this application.

1.5 Local Planning Policy

- 1.5.1 The following policies of the Kirklees Local Plan Strategy and Policies document (Kirklees Council, 2019a) are applicable to biodiversity and nature conservation (provided in summary only and the full Local Plan document should be viewed for full details):
- **Policy LP30 Biodiversity and Geodiversity** – to be protected and enhanced in Kirklees, including international, national and locally designated wildlife and geological sites, Kirklees Wildlife Habitat Network and Habitats and Species of Principal Importance. Harmful impacts to statutory designated sites are a result of proposed developments are avoided. Proposals with an adverse effect on a Local Wildlife Site (LWS), Local Geological Site (LGS), Ancient Woodland, Veteran tree or other important tree will need to show benefits outweigh the need to safeguard the local conservation value of the site of feature. Long term compensation will be required if proposals impact Habitats and Species of Principal Importance. Development proposals will be required to result in no significant loss to biodiversity in Kirklees following the mitigation hierarchy, with net gains shown through good design and including biodiversity enhancements. Proposals should incorporate biodiversity enhancement measures to

reflect the priority habitats and species identified for the relevant Kirklees Biodiversity Opportunity Zone.

- **Policy LP31 Strategic Green Infrastructure Network** – priority given to safeguarding and enhancing green infrastructure networks. Development proposals within or adjacent to these networks should ensure network function is retained or replaced, new or enhanced green infrastructure is added to the development scheme where appropriate, walking and cycling transport routes are integrated where possible and biodiversity is protected and enhanced, especially within the Kirklees Wildlife Habitat Network.
 - **Policy LP33 Trees** – proposals which directly or indirectly threaten trees or woodland of significant amenity will not be granted. Proposals should retain valuable or important trees, noted by their distinctiveness, contribution to amenity or Wildlife Habitat Network or green infrastructure networks.
 - **Policy LP34 Conserving and Enhancing the Water Environment** – proposals must ensure no deterioration of water courses or water bodies and where possible enhance the geomorphology and ecology of these watercourses. Source Protection Zones must be protected from contamination and surface water must be disposed of correctly (in line with the Local Plan drainage policy).
- 1.5.2 The Kirklees Council Development Plan policies map indicates the site is within the Strategic Green Infrastructure Network (River Colne Corridor), a Biodiversity Opportunity Zone (Flood Plains) and within Green Belt land (Kirklees Council, 2025a).
- 1.5.3 The Kirklees Biodiversity Opportunity Zones: Background report lists objectives/opportunities within the Floodplain and Riverine Corridors Zone (Kirklees Council, N/Aa). In addition, the Kirklees Biodiversity Opportunity Zones: Tables report lists habitats and species of principal importance for the Flood Plains and Riverine Zone (Kirklees Council, N/Ab). There is also a Habitat Action plan for Rivers, Riverine Corridors and Associated Habitats (Kirklees Council, N/Ac).
- 1.5.4 A map of the Kirklees Wildlife Habitat Network indicates the site is not within the network (Kirklees Council, N/Ac).
- 1.5.5 The Kirklees Habitats of Principal Importance (Kirklees Council, 2007a) and Species of Principal Importance (Kirklees Council, 2007b) cover the Kirklees Biodiversity Action Plan.
- 1.5.6 Refer to Appendix D for relevant details of European and National Legislation, and National Planning Policy.

1.6 Site Context

- 1.6.1 The approximately 1.5ha site lies in the north east of Marsden, a village in the borough of Kirklees in West Yorkshire. The site is predominantly comprised of an area of vacant or derelict land in the centre of the site, with an unfinished building with bricked walls approximately 1m high in the south of the site. In the east of the site is an area of modified grassland. The west of the site features a watercourse sided by both reedbeds, other neutral grassland and a parcel of Willow (*Salix* spp.) scrub. Lengths of native hedgerow with trees are present along the northern and southern boundary. A pedestrian/cycle path sides the River Colne and is found in the south west of the site and a hardstanding access track to the site is present on the southern boundary, joining Manchester Road south of the site and sided by woodland – much of which is Lowland Mixed Deciduous Woodland Habitat of Principal Importance – on both sides. Adjacent to the site on the western aspect is Cellars Clough reservoir, with the River Colne abutting the site on the southern aspect. To the immediate east is an area of grassland with scattered trees, some of which were found to be mature. Adjacent to the northern boundary is Huddersfield Narrow Canal LWS. The wider landscape is comprised of areas of grassland and woodland, with occasional roads and built development of villages and towns within Kirklees.
- 1.6.2 The site lies within the Southern Pennines National Character Area (Natural England, 2012) which is characterised as a “*part of the Pennine ridge of hills, lying between the Peak District National Park and Yorkshire Dales National Park. This is a landscape of large-scale sweeping moorlands, pastures enclosed by drystone walls, and gritstone settlements contained within narrow valleys. The area contains internationally important mosaics of moorland habitats which support rare birds such as merlin, short-eared owl and twite*”.

Figure 1 – Site Area



Image courtesy of Google Image Pro 7.3.6.10201, [Grid Ref: SE 05852 12535]. Imagery date 19th March 2025
Image accessed 13th June 2025.

2.0 Methodology

2.1 Desk Study

2.1.1 Desk study details were obtained from the following sources on the associated dates to provide background on ecological features in the vicinity of the site. In each case the search included the site and the specified area beyond the site boundary based on the expected zone of influence. Candidate and potential designations are considered too as these are also legally protected. The records search included:

- Statutory sites designated or classified under international conventions or European legislation within a 5km radius, statutory sites designated under national legislation (including Marine), non-statutory designations, existing EPS Licence applications and Great Crested Newt Pond Survey records within a 2km radius, and Priority Habitat & Ancient Woodland Inventory within a 0.5km radius [Magic Map, 13th June 2025] (DEFRA, 2025);
- Tree Preservation Orders (TPOs) and Biodiversity Conservation Areas within the immediate zone of influence [Kirklees Council (Kirklees Council, 2025a) and (Kirklees Council, 2025b)];
- Waterbodies within a 0.5km radius (Online mapping sources including: Google Maps; Magic Map; and Ordnance Survey Street View, 13th June 2025); and
- Locally designated wildlife sites & any notified Local Biodiversity Action Plan (BAP) Habitats, Legally protected species, any Priority species (which includes: National Biodiversity Species, Local BAP Species, Species of conservation concern and Red Data Book (RDB) species, Birds of Conservation Concern (BOCC), nationally rare and nationally scarce species, and OSPAR Commission list of threatened/declining species) and Invasive species (listed under section 14 of Schedule 9 only) within a 2km radius, and any important hedgerows/veteran trees within the immediate zone of influence [West Yorkshire Ecology Service (WYES) (28th May 2025)].

2.1.2 The Data has been edited where relevant to prevent sensitive or confidential records being made public in accordance with Guidelines for Accessing, Using and Sharing Biodiversity Data in the UK (CIEEM, 2023).

2.2 Field Survey

2.2.1 Field Surveys were undertaken on the following dates by the identified staff, all of whom satisfy necessary field survey competencies as stipulated by the Chartered Institute for Ecology and Environmental Management (CIEEM). Weather conditions on the day of survey have been included and where relevant survey/class licence numbers referred to.

Table 1 – Survey Dates and Conditions

Survey	Date	Staff/Licence	Environmental Conditions and Times
Preliminary Ecological Appraisal	28/04/2025	KT Smith BSc (Hons), MSc Consultant Ecologist at Enzygo Ltd.	Dry and clear (30% cloud cover), and 14°C with light wind.
River Condition Assessment, including Water Vole and White-clawed Crayfish eDNA	26/09/2025	Dr Rosalind King BA (Hons) PhD MCIEEM – Experienced Field Ecologist.	Dry and overcast (100% cloud cover), and 12°C with no wind.

Preliminary Ecological Appraisal

- 2.2.2 In accordance with Guidelines for Preliminary Ecological Appraisal 2nd Edition (CIEEM, 2017a) the Preliminary Ecological Appraisal (PEA) survey included the following.

UK Habitat Classification

- 2.2.3 This assessment has utilised the UK Habitat Classification (UKHab) methodology (UKHab, 2023), as the recommended published method of habitat classification. It has been used to categorise and map the primary habitat types present within the survey area using a standard set of habitat categories, with associated secondary codes/features identified where applicable. Details of current management and habitat condition have also been recorded where appropriate.
- 2.2.4 Each of the main habitats has been described; including details of component plant species abundances (recorded using the DAFOR scale: D=Dominant, A=Abundant, F=Frequent, O=Occasional, R=Rare). Additionally, any stands of non-native invasive plant species were recorded. Habitat extents have been visually mapped onto a topographic plan, with approximate location/areas recorded only (a GPS unit has not been utilised to accurately recorded these).

Assessment of possible presence/likely importance for Protected & Priority Species

- 2.2.5 An assessment of the possible presence of protected or priority species, and the likely importance of habitat features present for such species has also been undertaken, particularly where uncommon or specialised habitats are present in accordance with current PEA guidelines (CIEEM, 2017a). However, no specific protected species survey has been undertaken unless listed under additional surveys as below. Any incidental sightings of protected or priority species, or field signs of such species has also been recorded. Species assessed include: Plants & Fungi; Terrestrial/aquatic invertebrates; Fish; Amphibians; Reptiles; Breeding, wintering and migratory birds; Bats (including potential roost sites, foraging and commuting habitats/features), Badger, and Other mammal species.

River Condition Assessment (including Water Vole and White-clawed Crayfish eDNA Survey)

- 2.2.6 Refer to Appendices B and C.

2.3 Assessment

River Condition Assessment (including Water Vole and White-clawed Crayfish eDNA Survey)

2.3.1 Refer to Appendix B.

Assessment of Potential Development Impacts

- 2.3.2 A level of importance has been assigned to each ecological feature, where sufficient baseline data is available to do so, in accordance with current guidance (CIEEM, 2018). This is defined within a geographical context as follows: International and European; National; Regional; Metropolitan, County, vice-county or other local authority-wide area; River Basin District; Estuarine system/Coastal cell; and Local (plus Negligible where no associated value has been identified). For example, importance of designated sites reflects the geographical context of the designation (where designated sites no longer meet designation criteria and those formally 'de-notified' or where an undesignated site meets published selection criteria must also be considered). When considering habitats and species contextual information about distribution and abundance of that habitat/species in the area must be considered (if the habitat/species status is currently in a degraded or unfavourable condition its potential value should be considered).
- 2.3.3 The assessment then considers potential impacts (both positive and negative) generated during the construction and operational phase of the proposed application. Only impacts that are likely to be significant are considered. Impacts that are either unlikely to occur, or if they did occur are unlikely to be significant, are not considered.
- 2.3.4 Cumulative impacts are then considered where the application meets criteria in accordance with national EIA screening guidance (GOV.UK, 2019), and where agreed with the competent authority during scoping. This takes into consideration existing background levels of threat or pressure, looks at critical thresholds, and assess both additive/incremental and associated/connected impacts and effects.
- 2.3.5 Relevant aspects of ecological structure and function are then considered when determining if identified impacts will have a significant effect upon ecological features. Where necessary, this assessment utilises information from other specialists i.e. air quality, hydrology etc, to determine the level of impact. In accordance with current guidance (CIEEM, 2018) these are described using the following characteristics, where relevant: positive or negative; extent; magnitude; duration; frequency and timing; and reversibility.
- 2.3.6 The mitigation hierarchy is then explored in accordance with BS42020:2013 (BSI, 2013). This seeks as a preference to avoid impacts, then to mitigate unavoidable impacts, and as a last resort, to compensate for unavoidable residual impacts that remain after avoidance and mitigation measures. Justification has been provided by the client/their planner where the mitigation hierarchy cannot be followed, or for example where compensation is a preferred approach where the competent authority has adopted a County wide strategy i.e. District Level Licensing Schemes (GOV.UK, 2019). In this instance current national Biodiversity Offsetting guidance has also been consulted (GOV.UK, 2019). Additional information has also been provided by the client/their planner where the applicant wishes to demonstrate exceptional circumstances or where they wish to pursue alternative strategies. Any residual impacts following mitigation measures etc are then identified.

- 2.3.7 All mitigation measures follow species specific current best practice guidance and the source has been identified accordingly. Deviation from guidance has been explained by the ecologist and is proportionate to the predicted degree of risk to biodiversity and to the nature and scale of the proposed works.
- 2.3.8 It is important that planning decisions are based on up-to-date ecological data, and the specific timeframe over which survey data is considered valid follows general advice (CIEEM, 2019). Additionally, it should be noted that the presence/absence and status of protected species can change seasonally/annually. The age of data should also be assessed separately when considering the submission of an EPS Licence (i.e. Natural England may require data to be from the current season).
- 2.3.9 Local Environmental Records Centres (LERC) issue a licence for use of provided biodiversity data for 1 year only, after which time this should be renewed to validate an application (and reports updated accordingly to incorporate any new records). Following completion of surveys all relevant biodiversity data will be submitted to the relevant LERC and other groups as appropriate.

2.4 Limitations

- 2.4.1 Data held by consultees may not be exhaustive; the absence of evidence does not indicate evidence of absence. Enzygo cannot take responsibility for the accuracy of external data sources and as such discrepancies and inaccuracies may occur.
- 2.4.2 Natural England do not hold information of Ancient Woodland less than 2ha in size.
- 2.4.3 Records over 10 years old for transient species (as these are likely to have moved during the interim) and species protected from sale only under the W&C Act 1981 and amendments, are excluded (as these are not relevant to a planning application). Additionally, given the large number of priority species, these have only been included if identified from the desk study and/or habitats recorded on site have been assessed as providing suitable conditions.
- 2.4.4 Geological & landscape sites have only been included within this report where they have biodiversity or nature conservation components to their designation.
- 2.4.5 At certain times of year flora species may be in a state of senescence and are not readily identifiable. However, May represents a suitable time to identify the majority of flora species and it was possible to easily classify the commonly occurring habitat types. The timing of the surveys is not perceived as a survey limitation.
- 2.4.6 This document does not contain a comprehensive list of botanical species on site. Only plant species characteristic of each habitat and incidental observations of notable plant species were recorded.
- 2.4.7 Kirklees Council do not supply information on Important Hedgerows or Veteran Trees.
- 2.4.8 A thorough assessment of the Reedbed, Willow Scrub habitat and north west length of hedgerow could not be given due to the inaccessibility to this area of the site as the existing footbridge was closed due to safety concerns. However, these limitations have been recognised in the approach and is therefore not considered to represent an overall significant limitation.

3.0 Baseline Ecological Conditions

3.1.1 Ecological features identified by the desk study/field survey are presented below, along with their details and associated ecological value. Refer to appended drawings for the location/extent of ecological features where relevant.

Table 2 – Ecological Features

Ecological Feature	Details	Ecological Importance
Statutory sites designated or classified under international conventions or European legislation		
South Pennine Moors Phase 2 Special Protection Area (SPA) 900m north west	Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC: - Short-eared Owl (<i>Asio flammeus</i>) - Merlin (<i>Falco columbarius</i>) - European Golden Plover (<i>Pluvialis apricaria</i>)	International
South Pennine Moors Special Area of Conservation (SAC) 900m north west	Annex I habitats that are a primary reason for selection of this site: - European dry heaths (4030) - Blanket bogs (7130) Annex I habitats that present as a qualifying feature, but not a primary reason for selection of this site: - Northern Atlantic wet heaths with <i>Erica tetralix</i> (4010) - Transition mires and quaking bogs (7140)	International
Peak District Moors (South Pennine Moors Phase 1) SPA 1.4km south	Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC: - Short-eared Owl - Merlin - European Golden Plover	International

Ecological Feature	Details	Ecological Importance
Statutory sites designated under national legislation (& Impact Risk Zones)		
South Pennine Moors Site of Special Scientific Interest (SSSI) 825m north west	Features the largest areas of unenclosed moorland within West Yorkshire and contains the most diverse and extensive examples of upland plant communities in the county. Extensive blanket bogs occur on the upland plateaux with species-rich acidic flushes and mires. There are also wet and dry heaths and acid grasslands. This site supports a moorland breeding bird assemblage of regional and national importance.	National
Dark Peak SSSI 1.4km south	This site is the main moorland area of the Peak District and features blanket mires, wet and dry heaths, and acid grasslands. The site supports a full range of breeding birds found in the South Pennines and are of regional and national importance. The site also features a good variety of invertebrate fauna.	National
Impact Risk Zone (IRZ)	The Impact Risk Zone (IRZ) in which the site lies states the LPA should consult Natural England on the likely impacts of the following development categories: - Infrastructure: Pipelines and underground cables, pylons and overhead cables (excluding upgrades and refurbishment of existing network). Any transport proposal including new or extended footways, cycleways, roads/car parks, railways and waterways (excluding routine maintenance). Airports, helipads and other aviation proposals. - Wind and Solar: Solar schemes with a footprint > 0.5ha, all wind turbines. - Minerals, Oil and Gas: Planning applications for quarries, including: new proposals, Review of Minerals Permissions (ROMP), extensions, variations to conditions etc. Oil & gas exploration/extraction. - Rural Non-Residential: Large non-residential developments outside of existing settlements/urban areas where the net additional gross internal floorspace is > 1,000m² or the footprint exceeds 0.2ha. - Residential: Residential development of 50 units or more. - Rural Residential: Any residential development of 10 or more units outside of existing settlements/urban areas. - Air Pollution: Any industrial/agricultural development that could cause AIR POLLUTION (including: industrial processes, livestock & poultry units with a floorspace > 500m², slurry lagoons > 200m² & manure stores > 250 tonnes). - Combustion: General combustion processes >20MW energy input. Incl: energy from waste incineration, other incineration, landfill gas generation plant, pyrolysis/gasification, anaerobic digestion, sewage treatment works, other incineration/combustion. - Waste: Landfill. Including: inert landfill, non-hazardous landfill, hazardous landfill.	Proposals meet the criteria for which Natural England should be consulted (Residential: development of >50 units)

Ecological Feature	Details	Ecological Importance
	- Compost: Any composting proposal with more than 500 tonnes maximum annual operational throughput. Incl: open windrow composting, in-vessel composting, anaerobic digestion, other waste management. - Water Supply: Any development needing its own water supply eg remote rural housing that is not connected to a mains water supply, OR large infrastructure such as warehousing/industry where the total net additional gross internal floorspace following development is > 1,000m².	
Local Nature Reserves		
<i>No Local Nature Reserves within a 2km radius</i>	-	-
Other locally designated wildlife sites		
Huddersfield Narrow Canal Local Wildlife Site (LWS) 5m north	Site features a canal and supports various local wildlife.	County
Green Hill Clough LWS 275m west	Aerial imagery indicates this site is predominantly woodland with a watercourse running through it.	County
Drop Clough LWS 290m north west	Aerial imagery indicates this site is predominantly woodland with a watercourse running through it.	County
England HPI, Local BAP Habitats, Ancient Woodland, Important Hedgerows, Veteran Trees, TPOs and Conservation Areas		
Lowland Mixed Deciduous Woodland Habitat of Principal Importance (HPI) Adjacent to southern boundary	A total of approximately 28.62ha Lowland Mixed Deciduous Woodland HPI indicated within a 500m radius, with three parcels abutting the southern boundary and found to be 0.03ha, 0.18ha and 7.51ha in size.	Local
Lowland Heathland HPI 300m north west	A total of 2.69ha Lowland Heathland HPI indicated within a 500m radius, with the nearest parcel approximately 300m north west of the site and found to be 0.46ha in size.	Local
Upland Heathland HPI 415m south	A total of approximately 7.46ha Upland Heathland HPI indicated within a 500m radius, with the nearest parcel approximately 415m south of the site and found to be 6.7ha in size.	Local
Lowland Dry Acid Grassland HPI 425m east	A total of approximately 2.53ha of Lowland Dry Acid Grassland HPI indicated within a 500m radius, with the nearest parcel approximately 425m east of the site and found to be 2.53ha in size.	Local
Ancient Woodland	Magic Map (DEFRA, 2025) showed no areas of Ancient Woodland within 500m radius of the proposed site.	Negligible
Veteran Trees	Woodland Trust (Woodland Trust, 2024) indicates no veteran trees within or adjacent to the site, with the nearest located 1.45m south west of the site.	Negligible

Ecological Feature	Details	Ecological Importance
Tree Preservation Orders On-site	The Kirklees Council Tree Preservation Orders (TPOs) Map (Kirklees Council, 2025b) indicates there are several trees under TPOs both on-site and adjacent to the site. Trees 02A/13/t10-12 in the east of the site, as well as part of 02A/13/g4 in the south east of the site are covered by TPOs. Abutting the site on the eastern boundary is an area featuring numerous individual and groups of trees covered by TPOs, with the nearest (02A/13/t13) located approximately 5m east of the site boundary.	Local
Green/Blue & Aquatic Infrastructure, Dark Zones, and Local Policy		
Green Infrastructure	Whilst the site is predominantly comprised of vacant or derelict land, limited native hedgerow with trees is present onsite offering ecological linkage and providing green infrastructure function.	Local
Blue Infrastructure 	A watercourse was identified in the west of the site. In addition, the River Colne is adjacent on the southern boundary, Cellars Clough Reservoir is adjacent on the western boundary, and Huddersfield Narrow Canal LWS is 5m north of the site. The River Colne is confirmed as a main river on the Environmental Agency Statutory Main Rivers Map (EA, 2025). All features offer ecological linkage and provide blue infrastructure function.	Local
River Colne		
Dark Zones	There are no known dark zones across the site. In accordance with the standard guidance specified in the <i>Guidance Notes for Reduction of Obtrusive Lighting</i> (Institution of Lighting Professionals, 2021), the application site likely falls under Environmental Zone E3 (Well-inhabited Rural – Medium district brightness).	N/A

Ecological Feature	Details	Ecological Importance
Habitat Types		
Vacant or Derelict Land (u1f 82) 	The site is predominantly comprised of an area of Vacant or Derelict Land, with obvious signs of previously site clearance and now abandoned. Vegetation cover was <50% and included frequent Common Ragwort (<i>Jacobaea vulgaris</i>), Common Dandelion (<i>Taraxacum officinale</i>) and Creeping Buttercup (<i>Ranunculus repens</i>), occasional Ground-ivy (<i>Glechoma hederacea</i>), Common Sorrel (<i>Rumex acetosa</i>), White Clover (<i>Trifolium repens</i>), Garlic Mustard (<i>Alliaria petiolata</i>) and rare Wild Teasel (<i>Dipsacus fullonum</i>), Herb Robert (<i>Geranium robertianum</i>), Common Nettle (<i>Urtica dioica</i>) and Foxglove (<i>Digitalis purpurea</i>). This area is not classified as Open Mosaic Habitats on Previously Developed Land (covered in the Kirklees LBAP (Kirklees Council, 2007a)) due to the lack of spatial variation of the early successional communities onsite, with only Flower-rich grassland identified. Vacant or Derelict Land does not represent a Local or UK BAP Priority Habitat.	Negligible
Other Developed Land (u1b6) 	An area of sealed surface was identified in the east of the site. Vegetation cover was <10% and included Dandelions and White Clover. Other Developed Land does not represent a Local or UK BAP Priority Habitat.	Negligible

Ecological Feature	Details	Ecological Importance
Buildings (u1b5) 	Evidence of a building abandoned mid-construction was identified in centre of the site, comprised of grey bricks. Buildings does not represent a Local or UK BAP Priority Habitat.	Negligible
Modified Grassland (g4) 	An area of Modified Grassland was identified along the eastern boundary. These areas are found to be species poor (<9 species per m²) and of a uniform, low lying sward. The species assemblage included abundant Perennial Rye-grass (<i>Lolium perenne</i>), frequent Creeping Buttercup, Common Sorrel, Selfheal (<i>Prunella vulgaris</i>) and Creeping Thistle (<i>Cirsium arvense</i>), occasional Herb Robert, Lesser Burdock (<i>Arctium minus</i>), Butterfly-bush (<i>Buddleja davidii</i>), Timothy (<i>Phleum pratense</i>) and Cow Parsley (<i>Anthriscus sylvestris</i>), and rare Bramble (<i>Rubus fruticosus</i> agg.). Modified Grassland does not represent a Local or UK BAP Priority Habitat.	Negligible

Ecological Feature	Details	Ecological Importance
Reedbeds (f2e) 	A distinctive wetland area was identified siding the watercourse on the northern boundary. This area was dominated by Common Reed (<i>Phragmites australis</i>) and >5m wide. Other vegetation present included occasional Reed Canary Grass (<i>Phalaris arundinacea</i>), rare Grey Willow (<i>Salix cinerea</i>) saplings and Rosebay Willowherb (<i>Chamaenerion angustifolium</i>). Reedbeds is a UK BAP Priority Habitat, and a HPI covered in the Kirklees Biodiversity Action Plan (Kirklees Council, 2007a), with the Floodplain Biodiversity Opportunity Zone considered a key geographical area for this habitat.	Local
Other Neutral Grassland (g3c) and Other Neutral Grassland with Scattered Rushes (g3c 14) 	Aside from the parcel of Reedbed HPI shown above, the areas of grassland siding the southern and part of the northern boundary of the watercourse were classed as Other Neutral Grassland as the most appropriate UKHAB Habitat type. The northern parcel also included scattered rushes. No ryegrasses were found and White Clover cover was <30%, grass species not typically associated with intensive agricultural production was identified (Yorkshire Fog (<i>Holcus lanatus</i>), and there was >20% cover of broadleaved herbs and sedges. There are no notable indicators of any rare or uncommon grassland types. The species assemblage included frequent Soft-rush (<i>Juncus effusus</i>), Common Reed, White Clover, Creeping Buttercup and Rosebay Willowherb, occasional Colt's-foot (<i>Tussilago farfara</i>), Reed Canary Grass, Bramble, Black Medick (<i>Medicago lupulina</i>) and Yorkshire Fog, and rare Field Horsetail (<i>Equisetum arvense</i>), Creeping Thistle, Common Nettle, Field Forget-me-not (<i>Myosotis arvensis</i>), Intermediate Lady's Mantle (<i>Alchemilla xanthochlora</i>), Smooth Sow-thistle (<i>Sonchus oleraceus</i>), Foxglove, Common Ragwort, Wood Avens (<i>Geum urbanum</i>) and Common Vetch (<i>Vicia sativa</i>). Occasional Sycamore (<i>Acer pseudoplatanus</i>) and Grey Willow saplings were also present. Other Neutral Grassland does not represent a Local or UK BAP Priority Habitat.	Negligible

Ecological Feature	Details	Ecological Importance
Willow Scrub (h3j) 	In the south west of the site is a parcel of Willow Scrub, with Willow (<i>Salix</i> spp.) dominant. Species included dominant Crack Willow (<i>Salix fragilis</i>), occasional Goat Willow, Bramble and Common Ivy (<i>Hedera helix</i>). Willow Scrub does not represent a Local or UK BAP Priority Habitat.	Negligible
Other Rivers and Streams (r2b) 	In the west of the site is a watercourse, flowing west to east from Cellars Clough to the River Colne south of the site. The water was found to be relatively fast flowing, and approximately 1m wide and 0.5m deep. Vegetation noted included Common Reed, Reed Canary Grass and Rosebay Willowherb. The Environmental Agency Statutory Main Rivers Map confirms this watercourse is not classed as a main river (EA, 2025). Rivers and Streams is a UK BAP Priority Habitat, with Rivers and Riverine HPIs covered in the Kirklees Biodiversity Action Plan (Kirklees Council, 2007a), with the Floodplain Biodiversity Opportunity Zone considered a key geographical area for this habitat.	Local

Ecological Feature	Details	Ecological Importance
Culvert (u1 851) 	The watercourse in the west of the site runs to a culvert adjacent to the area of Vacant or Derelict Land. This diverts the watercourse underground to the River Colne. Culvert does not represent a UK or Local BAP Priority Habitat.	Negligible
Other Native Hedgerow with Trees (h2a5 11) 	A length of Native Hedgerow with Trees was identified along part of the northern boundary in the east of the site. The species assemblage included: • Standard trees included Sycamore. • Woody species included Hawthorn (<i>Crataegus monogyna</i>). • Ground cover included Cleavers (<i>Galium aparine</i>) and Dandelions. • This length of hedgerow was assessed as of Moderate condition. Other Native Hedgerow represents a UK BAP Priority Habitat, with all lengths consisting predominantly of at least one woody UK species (i.e.>80% or more cover). However, with less than four native woody species identified within a 30m section this hedgerow does not qualify as 'species-rich' (Maddock, 2008). This hedgerow may qualify as historically 'important' in accordance with The Hedgerow Regulations 1997. However, this hedgerow is unlikely to be considered ecologically important due to a lack of diversity in woody species and lack of associated features. Trees are also covered under Policy LP33 Trees of the Kirklees Local Plan Strategy and Policies document (Kirklees Council, 2019a).	Local

Ecological Feature	Details	Ecological Importance
Species-rich Native Hedgerow with Trees (h2a6 11) 	Two lengths of Species-rich Native Hedgerow were identified along the northern boundary in the west of the site, and along the southern boundary in the east of the site. The species assemblage of the northern hedgerow included: • Standard trees included Pedunculate Oak (<i>Quercus robur</i>), Sycamore and Ash (<i>Fraxinus excelsior</i>). • Woody species included Elm (<i>Ulmus glabra</i>), Holly (<i>Ilex aquifolium</i>), Birch (<i>Betula pendula</i>), Goat Willow (<i>Salix caprea</i>) and Birch (<i>Betula pendula</i>). • Ground cover included Common Ivy, Cleavers, Broad-leaved Dock (<i>Rumex obtusifolius</i>) • This length of hedgerow was assessed as of Good condition. The species assemblage of the southern hedgerow included: • Standard trees included Sycamore. • Woody species included Alder (<i>Alnus glutinosa</i>), Holly, Hawthorn and Hazel (<i>Corylus avellana</i>). • Ground cover included Rhododendron (<i>Rhododendron ponticum</i>), Indian Balsam (<i>Impatiens glandulifera</i>), Common Ivy, Cleavers, Broad-leaved Dock, Dandelion and Wood Avens. • This length of hedgerow was assessed as of Moderate condition. Species-rich Native Hedgerow represents a UK BAP Priority Habitat, with all lengths consisting predominantly of at least one woody UK species (i.e. >80% or more cover). This hedgerow may qualify as historically 'important' in accordance with The Hedgerow Regulations 1997. Trees are also covered under Policy LP33 Trees of the Kirklees Local Plan Strategy and Policies document (Kirklees Council, 2019a).	Local

Ecological Feature	Details	Ecological Importance
Built Linear Feature (u1e) 	A stone wall was identified along the northern boundary of the site. Built Linear Feature is not a UK or Local BAP Priority Habitat.	Negligible
Legally Protected & Priority Species (& Consultation Zones where applicable)		
Bats 	Whilst the site is predominantly comprised of vacant and derelict land, the lines of native hedgerow and trees serve as linear features connecting to suitable habitat beyond the site boundary of greater value including Lowland Mixed Deciduous Woodland HPI and areas proving Blue Infrastructure Function including the River Colne, Huddersfield Narrow Canal LWS, Sparth Reservoir and Cellars Clough. It is confirmed the unfinished building identified onsite is deemed entirely unsuitable for roosting bats, with existing brickwork approximately 1m high and exposed to the elements and natural light. The local records centre identified numerous records of bat species within 2km of the site in the last ten years. The records included Daubenton's Bat (<i>Myotis daubentonii</i>), Brown Long-eared Bat (<i>Plecotus auritus</i>), Leisler's Bat (<i>Nyctalus leisleri</i>), unidentified <i>Myotis</i> species (<i>Myotis</i> spp.), Noctule (<i>Nyctalus noctula</i>), Common Pipistrelle (<i>Pipistrellus pipistrellus</i>) and Soprano Pipistrelle (<i>Pipistrellus pygmaeus</i>). There are three Natural England European Protected Species License (EPSLs) identified within a 2km radius of the site. One EPSL is located within the site and is for the destruction of a resting place for Common and Soprano Pipistrelle (licence reference 2018-38561-EPS-MIT). Two EPSLs were located approximately 1.8km south west, with both referring to destruction of a resting place for a Common Pipistrelle (licence reference 2015-12005-EPS-MIT and 2015-12005-EPS-MIT-1). The Kirklees Biodiversity Action Plan included Brown Long-eared Bat, Noctule and Soprano Pipistrelle (Kirklees Council, 2007b). The previous EclA (Quants, 2018) undertook nocturnal emergence surveys of the previously existing mill building onsite, with Common Pipistrelles observed emerging. Reference is made to an earlier	Local

Ecological Feature	Details	Ecological Importance
	Ecological Survey report (Quants, 2015) where both Common and Soprano Pipistrelle emergences occurred from the mill. The 2018 report noted that the Bat Barn (planning reference 2008/62/90271/W1) built in 2008 approximately 30m south of the site was to receive bats excluded from mill following bat roosts identified in 2007.	
Badger	No incidental evidence of Badger (e.g. setts, latrines, prints etc.) was observed during the Preliminary Ecological Appraisal survey, however onsite native hedgerow, scrub and Lowland Woodland Mixed Deciduous HPI adjacent to the southern boundary provides suitable shelter, refuge and potential sett creation habitat, and provide corridors of connectivity to the surrounding landscape. Hedgerow within the site provide a limited extent of suitable foraging habitat, however there is an abundance of equivalent and likely more favourable foraging resource in the surrounding area. No records of Badger were identified within a 2km radius in the last ten years. However, the site is within an area of increased probability of Badger activity, according to local data records. The previous EclA report (Quants, 2018) found no evidence of Badger during the site visit and was reasonably discounted, with no further survey recommended.	Local
Dormouse	Onsite native hedgerow provides suitable habitat for Dormouse (<i>Muscardinus avellanarius</i>), though the site is in an area of the country where this species is significantly rare, if not extinct. Given the site location and composition, individuals are not expected to be present on or disperse to the proposed site. No records of Dormouse within a 2km radius.	Negligible

Ecological Feature	Details	Ecological Importance
Otter and Water Vole	The watercourse located in the west of the site may provide suitable foraging, refuge and shelter opportunities for riparian fauna such as Otter (<i>Lutra lutra</i>) and Water Vole (<i>Arvicola amphibius</i>). Reedbed habitat also provides suitable foraging, commuting and refuge habitat for Otter and Water Vole. No incidental field signs of Water Vole was identified during the survey. See Appendix B for further details. The eDNA samples for Water Vole taken from the three watercourses were found to be negative. See Appendix C for the results. The local data records found no records for Otter within a 2km radius of the site and in the last ten years. The local data records identified one record for Water Vole within a 2km radius of the site and in the last ten years. This record is approximately 140m north east from the site and within Huddersfield North Canal. The Kirklees Biodiversity Action Plan included Otter and Water Vole (Kirklees Council, 2007b). The EcIA report (Quants, 2018) noted the River Colne did not provide suitable habitat for Water Vole due to a lack of suitable vegetation, and with no field signs of Water Vole noted during the surveys. No evidence of Otter was recorded within the site or along the adjacent section of the River Colne. Both species were therefore reasonably discounted, with no further surveys recommended.	Local
Other Protected Mammals	No evidence of, or specific opportunities for, any other species of protected mammal. No Local data records of Other Protected Mammals were identified as within a 2km radius and in the last ten years.	Negligible
Specially Protected Birds	No evidence of, or significant specific opportunities for, any specially protected bird species within the limited hedgerow, scrub and unfinished building onsite. Adjacent watercourses provide a limited extent of suitable foraging habitat for Kingfisher (<i>Alcedo atthis</i>), although no high vertical banks or structure suitable for nesting have been identified. No moorland habitat present providing any suitability for locally notable upland species including Merlin (<i>Falco columbarius</i>), Short-eared Owl (<i>Asio flammeus</i>) and Golden Plover (<i>Pluvialis apricaria</i>). In addition, there are no open arable farmland habitats suitable to attract nocturnally feeding Golden Plover. Records of specially protected Schedule 1 bird species present within 2km of the site within the last 10 years include Kingfisher. No specially protected birds are covered in the Kirklees Biodiversity Action Plan (Kirklees Council, 2007b).	Negligible

Ecological Feature	Details	Ecological Importance
Breeding, Wintering and Migratory Birds	Whilst the site is predominantly comprised of vacant and arable land, the native hedgerow with trees, scrub and reedbed onsite offers limited suitable nesting and foraging habitat for a restricted range of birds likely present in the local area. It is not considered this development will lead to significant loss of suitable habitat for ground-nesting bird species such as Skylark (<i>Alauda arvensis</i>) and Lapwing (<i>Vanellus vanellus</i>), with the site featuring limited grassland and no arable fields preferred by these species, and enclosed by boundary hedgerow and adjacent woodland which prevent the wide field of view required by the species. Additionally, significant extents of more favourable grassland and arable fields offering suitable nesting habitat in the wider landscape. With no nearby wetlands, coastline or designated sites associated with migratory and wintering birds, it is assessed the site does not provide any notable core or secondary wintering bird habitat and unlikely to attract any notable assemblage of wintering and migratory birds (e.g. waders and waterfowl). The data search has revealed records of several Priority Species of bird within a 2km in the last 10 years including Common Cuckoo (<i>Cuculus canorus</i>) and Common Linnet (<i>Linaria cannabina</i>). Numerous species are included in the Kirklees LBAP including (but not limited to): Common Linnet, Common Cuckoo, Grasshopper Warbler (<i>Locustella naevia</i>), Eurasian Tree Sparrow (<i>Passer montanus</i>) and Bullfinch (<i>Pyrrhula pyrrhula</i>) (Kirklees Council, 2007b). The previous EclA report (Quants, 2018) found no evidence of notable bird species during the site visit and was reasonably discounted, with no further survey recommended.	Local
Common Reptiles	The native hedgerow with trees and scrub provides a limited extent of suitable habitat for common reptiles such as Slow-worm (<i>Anguis fragilis</i>) and Grass Snake (<i>Natrix helvetica</i>), and with good connectivity to the surrounding landscape from where they could disperse from. Though it is noted the predominantly vacant or derelict land and developed land does not provide a favourable combination of shelter, refuge, basking and foraging potential, and the site provides very limited wetland habitat with potential for individual numbers of Common Reptiles only. No records of Common Reptiles within 2km of the site and in the last 10 years. Several reptile species are included in the Kirklees LBAP including (but not limited to): Adder (<i>Vipera berus</i>), Grass Snake (<i>Natrix natrix</i>) and Slow-worm (<i>Anguis fragilis</i>) (Kirklees Council, 2007b). The previous EclA report (Quants, 2018) found no evidence of reptiles during the site visit and was reasonably discounted, with no further survey recommended.	Local
Great Crested Newt	Whilst there is a watercourse within the site, the water is fast flowing and is therefore unsuitable for breeding GCN. Whilst there are no waterbodies were identified during the site visit providing any potential for breeding GCN within the site, aerial imagery and OS maps indicate there are seven	Local

Ecological Feature	Details	Ecological Importance
	potential breeding ponds within a 500m radius of the site boundary. Three ponds (50m, 140m and 475m north east of the site) are beyond the stone wall lining the northern boundary of the site and Huddersfield Narrow Canal LWS serving as complete physical barriers of dispersal to the site. The remaining four ponds (200m, 235m 240m and 390m south east of the site) are beyond the River Colne and Manchester Road, also serving as complete physical barriers of dispersal to the site. It is confirmed the site is not within a GCN Risk Zone for North and West Yorkshire (Natural England, 2023a) or Greater Manchester (Natural England, 2023b). Though the site is predominantly vacant or derelict land offering negligible opportunities for GCN, the grassland, scrub, native hedgerow with trees and rubble piles offer a limited extent of suitable terrestrial habitat. Lowland Woodland Mixed Deciduous HPI adjacent to the site on the southern boundary may provide suitable terrestrial habitat from which GCN may disperse to the proposed development, stone walls were found lining some of the boundary between this woodland and the proposed site and served as a partial physical barrier. The local data records centre identified no records of GCN within 2km of the site within the last 10 years. Magic Map (DEFRA, 2025) did not identify any EPS Licences, Pond Surveys or Class Survey Licences for GCN within a 2km radius of the site. GCN is included as a species of principal importance in the LBAP (Kirklees Council, 2007b). A map included in the Species Action Plan for GCN indicates the site is not within an area of potential GCN metapopulation (Kirklees Council, N/A). There is currently no District Level Licencing scheme for GCN in Kirklees. The previous EclA report (Quants, 2018) noted there were no suitable waterbodies for GCN within 500m of the site, with waterbodies within and adjacent to the site (including Huddersfield Narrow Canal LWS, River Colne and Cellars Clough fishing pond) unsuitable due to dense fish populations.	
Other Protected Herpetofauna	No suitable habitats within or immediately adjacent to the site specifically suitable for other species of protected herpetofauna. No records of other protected amphibian or reptile species within a 2km radius.	Negligible
Protected Fish/Marine	Given the size of the watercourse, it is not anticipated to offer any significant opportunities for protected fish or marine species. The local data records returned records for Brown/Sea Trout (<i>Salmo trutta</i>) within a 2km radius of the last 10 years.	Negligible

Ecological Feature	Details	Ecological Importance
	Brown/Sea Trout, along with several other species of fish including (but not limited to) River Lamprey (<i>Lampetra fluviatilis</i>) and Atlantic Salmon (<i>Salmo salar</i>) are included in the Kirklees LBAP (Kirklees Council, 2007b).	
White-clawed Crayfish	The watercourse onsite may provide suitable shelter and foraging habitat for White-clawed Crayfish. No records of White-clawed Crayfish within a 2km radius within the last 10 years. The eDNA samples for White-clawed Crayfish taken from the three watercourses were found to be negative. See Appendix C for the results. The previous EcIA report (Quants, 2018) confirmed surveys undertaken in 2015 confirmed the likely absence of White-clawed Crayfish within the section of River Colne adjacent to the site, however the onsite watercourse was not mentioned.	Negligible
Protected Invertebrates	Due to the site comprised of predominantly vacant land and developed land, the site is unlikely to support a range or diversity of invertebrates or likely to support any protected invertebrate species. No records of Protected Invertebrates within a 2km radius in the last 10 years.	Negligible
Protected Flora	No protected flora species detected during the field survey. Only common and widespread habitats present, and unlikely to support any protected flora species. No records of Protected Flora within a 2km radius in the last 10 years.	Negligible
Invasive Flora  Indian Balsam onsite	Indian Balsam and Rhododendron were identified during the PEA walkover onsite within hedgerow along the southern boundary and within woodland adjacent to the southern site boundary. An extensive area of Indian Balsam was also identified adjacent to the eastern boundary and encroaching towards the site. During the MoRPh RCA survey Indian Balsam was noted along the banks of all three watercourses and Japanese Knotweed (<i>Reynoutria japonica</i>) was identified along the north bank of the River Colne. See Appendix B for further details. Records of Indian Balsam and Japanese Knotweed and Rhododendron noted within a 2km radius in the last 10 years. The previous EcIA report (Quants, 2018) confirmed Indian Balsam, Japanese Knotweed and Rhododendron were present along the banks of the River Colne, just south of the site.	Local
Invasive Fauna	No invasive species detected during the survey and no specific opportunities for any invasive species identified. One record of both Canada Goose (<i>Branta canadensis</i>) and Signal Crayfish (<i>Pacifastacus leniusculus</i>) noted within 2km in the last 10 years.	Negligible

Ecological Feature	Details	Ecological Importance
Priority Species	The watercourse, grassland, reedbeds and hedgerow with trees provide foraging and sheltering opportunities for Priority Species including Common Toad (<i>Bufo bufo</i>) and Hedgehog (<i>Erinaceus europaeus</i>). No records of priority species in a 2km radius of the site in the last 10 years. The previous EcIA report (Quants, 2018) stated Hedgehog could potentially occur within the site.	Local

4.0 Assessment and Mitigation

- 4.1.1 Assessment of impacts and the associated ecological effect to identified ecological features are presented below. Ecological features have been screened out where these are of negligible importance, no likely significant impacts have been identified or where impact is unlikely to occur.
- 4.1.2 To clarify, other than the ecological features listed below, there are no perceived potential impacts on any other sites, habitats or species in the wider area. The proposals are of a type, scale and distance that any direct or indirect construction or operational impacts on the other identified ecological features are reasonably discounted. Specifically, other than potential transport-related air quality impacts (as highlighted below), no further potential impacts of the proposals have been identified on South Pennine Moors Phase 2 SPA, South Pennine Moors SAC, Peak District Moors SPA, South Pennine Moors SSSI, Dark Peak SSSI, Green Hill Clough LWS and Drop Clough LWS, with no direct hydrological connectivity. It is considered that a separate Stage 1 Habitat Regulations Assessment (HRA) is not necessary in this instance to confirm that there are no likely significant effects of the proposals on the qualifying features of these sites.

Table 3 – Assessment of effect and mitigation measures

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
South Pennine Moors Phase 2 SPA, South Pennine Moors SAC and SSSI, Peak District Moors (South Pennine Moors Phase 1) SPA, and Dark Peak SSSI	Potential degradation of habitats from transport-related air quality emissions Significant, adverse, permanent, irreversible impact.	A separate technical Air Quality Road Emissions Screening Assessment is required in order to confirm any potential impacts from any increases in site traffic during construction or operation. At the discretion of the Planning Officer, Natural England to be consulted to conform the assessment of impacts presented here. There is no direct hydrological connectivity to the designated sites, the site does not support habitats which compliment and contribute to the value of the designated site habitats (including not representing functionally-linked land for the qualifying bird species), and no significant potential impacts from any increases in recreational disturbance is anticipated.	TBC	TBC
Other Native Hedgerow HPI, Lowland Mixed Deciduous Woodland HPI and Green Infrastructure	Risk of damage and/or degradation of UK BAP Priority Habitat and green infrastructure which provides wildlife corridor function. Significant, adverse, permeant, reversible impact.	The adjacent areas of Lowland Mixed Deciduous Woodland HPI will require a protective buffer. The final site layout has been sensitively designed to incorporate the retention of existing hedgerow, which contribute to notable green infrastructure and wildlife corridor function. Throughout the construction phase these habitats will be protected in accordance with BS5837:2012 <i>Trees in relation to design, demolition and construction</i> .	None required	No significant effect anticipated

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
		<i>Recommendations</i>, including installing and maintaining appropriate protection fencing. All contractors are to be made aware of the purpose of the fencing, with signage used where necessary, and no works are to occur beyond this established boundary other than proposed landscape planting, including no storage of materials or machinery. The sensitive lighting scheme mentioned above will also be implemented to avoid potential degradation of onsite hedgerow and adjacent woodland. Assuming these protection measures and sensitive site design can be implemented, it is not considered any specific compensation for loss of habitat is necessary or justified.		
Huddersfield Narrow Canal LWS, Blue Infrastructure and Riparian Fauna	Risk of direct damage during site clearance and construction phase. Significant, adverse, permanent, irreversible impact. Risk of killing/injury of Riparian Fauna during the construction phase. Minor adverse, temporary, reversible impact. Risk of degradation of Blue Infrastructure habitat for Riparian Fauna through run-off/pollution and artificial lighting during construction and operation. Minor adverse, temporary, reversible impact.	As the River Colne is within Lowland Mixed Deciduous Woodland HPI, an undeveloped protective buffer has already been suggested to the woodland edge. This will serve to minimise the risk of damage to the river. A buffer should also be implemented for the watercourse in the west of the site, and Huddersfield Narrow Canal LWS located 5m north of the site. In addition, to avoid potential degradation of the onsite watercourse and off-site river and canal through excessive artificial lighting overspill, a sensitive lighting scheme shall be implemented making use of suitable products such as directional, low-level, capped, screened and/or low-lux lighting. To avoid potential pollution and run-off impacts during construction, site works will be undertaken in accordance with best practice and the through adoption of the appropriate Environment Agency guidance (refer to updated 2019 Environment Agency guidance "<i>Pollution prevention for businesses</i>" Pollution prevention for businesses - GOV.UK (www.gov.uk)). This includes appropriate storage of chemicals, controlled refuelling of vehicles, spill kits etc. The recommendations for the protection of green and blue infrastructure including implementing sensitive lighting, will retain suitable habitats for foraging, commuting and refuge for Otter and Water Vole at the site including stream and reedbed. As such, no further detailed survey for Otter or Water Vole are deemed proportionate or justified in this instance.	None required	No significant effect anticipated

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
Reedbed HPI	Risk of damage and/or degradation of UK BAP Priority Habitat which provides wildlife corridor function. Significant, adverse, permeant, reversible impact.	The area of Reedbed HPI has been retained, with a protective buffer recommended. As with the above, all contractors are to be made aware of the purpose of the fencing, with signage used where necessary, and no works are to occur beyond this established boundary other than proposed landscape planting, including no storage of materials or machinery. The final site layout has been sensitively designed to incorporate the retention of existing Reedbed habitat, which offers wildlife corridor function and offers foraging and refuge opportunities for local fauna. The sensitive lighting scheme mentioned above will also be implemented to avoid potential degradation of onsite hedgerow and adjacent woodland.	None required	No significant effect anticipated
Bats	Risk of degradation of suitable bat foraging and commuting habitat. Minor adverse, permanent, reversible impact.	The implementation above for the protection of hedgerows with trees including implementing sensitive lighting, will retain suitable habitats for foraging and commuting bats at the site. These protection measures will also minimise the risk of degradation of suitable foraging and commuting habitats for bats, ensuring any potential impacts on associated potential roosting features are avoided. The lighting scheme will be designed in accordance with the recent guidance <i>Bats and artificial lighting at night</i> (ILP, 2023). Given the location and size of the site, the habitats present, and nature of the sensitively designed final site layout, it is not considered any further bat activity survey is proportionate or justified in this instance.	None required	No significant effect anticipated

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
Badger	Risk of killing/injury of Badger commuting across construction site. Unlikely, minor adverse, temporary, reversible impact. Risk of damage/disturbance of Badger setts during the construction phase. Significant, adverse, permanent, irreversible.	To minimise the risk of injury/killing of badgers and damage/destruction of setts which could be created within the adjacent Lowland Mixed deciduous Woodland HPI before commencement of construction works, a pre-commencement Badger check will be conducted to ensure Badger remain absent from the site and have not colonised the site or immediate surrounds. This survey will identify any further required mitigation measures and inform a Natural England licence application (in the unlikely event this is necessary). Due to the limited habitat onsite suitable for badgers and size of the site overall, no further specific predetermination surveys are deemed necessary to inform this assessment. Notwithstanding the results of this pre-commencement check, as suitable habitats for Badger are present, this species is at risk of being harmed by construction activities if they were to enter the site, the construction phase will implement a set of precautionary reasonable avoidance measures. These RAMs are to include details of: - Covering any holes, trenches or other excavations in which a Badger may fall into and become trapped overnight, otherwise a means of escape provided (e.g. a plank of wood); - If piles of soil are to be stored within the site, these will be left un-compacted and not permitted to grass over to reduce the likelihood of Badger using them for new sett excavation; - Any pipes between 0.1 and 0.5m in diameter must be stored with caps on to prevent Badger access; and - Any chemicals must be stored securely so that they cannot be accessed by inquisitive Badger accessing the site from the wider area.	None required	No significant effect anticipated
Nesting Birds	Risk of disturbance of nesting birds during construction phase. Minor adverse, temporary, irreversible impact.	To avoid an offence being committed in respect of nesting birds, site clearance including demolition will be planned to be conducted outside of the bird nesting season (March to August inclusive), where possible. If it is necessary to undertake these works during the bird nesting season, a suitably trained ECoW would supervise the clearance to ensure no active nests are affected. If any active nests are detected, an appropriate protection area around the nest(s) will be established until it can be determined that the nest is longer active. The recommendations above for retention and protection of adjacent Lowland Mixed Deciduous Woodland HPI and onsite hedgerows with trees habitats will ensure there is no significant loss of nesting habitat.	None required	No significant effect anticipated

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
Common Reptiles	Low risk of killing/injury of Common Reptiles during the construction phase. Minor adverse, temporary, irreversible impact.	The construction phase will implement a series of best practice precautionary measures to minimise the risk of killing/injury of common reptiles during the construction phase. Furthermore, any vegetation removal will be performed in an ecologically sensitive manner, undertaken by an ECoW. In each instance, an ecologist will check any potential habitats/refugia immediately prior to clearance. Vegetation will be cut/felled to a height of 0.15m to encourage any wildlife present to move outside of the working area. The cut habitats and any remaining refugia habitats will be checked again by an ECoW prior to stripping any stumps or topsoil. Considering the limited suitable habitat onsite, and potential for individual numbers of common reptiles, it is considered no further detailed Reptile Survey is proportionate or justified.	None required	No significant effect anticipated
Great Crested Newt	Risk of killing/injury during the construction phase. Significant adverse, temporary, irreversible impact. Risk of loss, damage and/or degradation of GCN aquatic and terrestrial habitat. Significant adverse, temporary, reversible impact.	As above, implement best practice precautionary measures to minimise the risk of accidental injury/killing of any GCN found during the construction phase. If any GCN's are found during the construction phase, work shall immediately cease in the area and an ecologist should be contacted for advice on the appropriate actions. Considering the notably low risk of GCN presence and associated killing/injury during construction, it is not considered any further predetermination survey or Natural England licensing is proportionate or justified in this instance.	None required	No significant effect anticipated
Other Priority Species	Low risk of killing/injury priority wildlife during the construction phase. Minor adverse, temporary, irreversible impact.	As above, implement best practice precautionary measures to minimise the risk of accidental injury/killing of any priority wildlife such as Hedgehog found during the construction phase. As with Common Reptiles, vegetation removal will be performed in an ecologically sensitive manner, undertaken by an ECoW. In each instance, an ecologist will check any potential habitats/refugia immediately prior to clearance. Vegetation will be cut/felled to a height of 0.15m to encourage any wildlife present to move outside of the working area. The cut habitats and any remaining refugia habitats will be checked again by an ECoW prior to stripping any stumps or topsoil.	None required	No significant effect anticipated

Ecological Feature	Impact	Avoidance/Mitigation	Compensation	Significance of Residual Effect
Invasive Flora	Risk of causing the spread of invasive flora in the wild. <i>Minor, adverse, temporary, reversible impact.</i>	An invasive species contractor will produce a treatment and eradication plan to remove the Indian Balsam and Rhododendron during the construction phase and will take a precautionary approach to the extent of invasive flora coverage.	None required	No significant effect anticipated

5.0 Enhancement and Monitoring

- 5.1.1 Opportunities for biodiversity enhancement (above and beyond those required to mitigate for any identified impacts) have been determined through consideration of: Ecological Features identified on site and within the zone of influence; Historical records of protected species/habitats present within the locality; National and Local planning policy including National and Local Biodiversity habitats/species; Local Development Plans including consideration of Green/Blue Infrastructure Resource; Consultation with third parties/stakeholders where applicable; and Other influencing factors such as underlying Geology/Hydrology, intended operational activities, and existing disturbance activities within the locality. This makes specific reference to Biodiversity Net Gain, Good practice principles for development (CIEEM, IEMA, CIRA, 2019).
- 5.1.2 In accordance with the local and national policy and the Environment Act 2021 there is a requirement to demonstrate at least a +10% biodiversity net gain, and a BNG calculation i.e. DEFRA metric, is to be provided. Additional biodiversity enhancements will include the following and will provide additional benefits to wildlife and biodiversity, and which are not accounted for in the DEFRA Metric which deals with areas of habitat only and not point specific enhancements such as bird and bat boxes. The specific location and details of the proposals can be detailed within a Biodiversity Enhancement Strategy (BES) in accordance with BS42020:2013 or detailed on Landscape Plans as appropriate.

Table 4 – Additional Enhancement

Ecological Feature	Additional Enhancement
Landscape Planting	The final landscape planting scheme should incorporate a range of native species and species which are known to be of value to wildlife and which are suitable to the site location and conditions. Planting has been focussed on a linear design to provide enhanced habitat connectivity and wildlife corridor function across and around the site, including complementing and contributing to existing value provided by hedgerows, scrub and woodland.
Nesting Birds	To provide enhancement opportunities for nesting birds the development could incorporate bird nest boxes suitable for a range of species likely to present at the developed site (e.g. House Sparrow, Starling etc.). Boxes should be positioned 2.5 to 5 metres above ground level, away from major sources of human disturbance and where positioned on buildings or structures should also avoid south-facing elevations where excessive sunlight can cause chicks to overheat in the nest.
Roosting Bats	To provide enhancement opportunities for roosting bats the development could incorporate provision of bat roost boxes. The boxes should be positioned 2.5 to 5 metres above ground level, away from major sources of human disturbance and artificial lighting and should face onto suitable foraging and commuting habitats (e.g. new landscape planting).
Deadwood Hibernacula	It is recommended that informal deadwood hibernacula are created at the site boundaries to provide enhanced refuge, shelter and hibernation opportunities for a range of wildlife including small mammals, common amphibians and invertebrates. The woody arisings from any required scrub clearance would provide suitable materials for the creation of these piles rather than any requirement to import materials from off-site.

- 5.1.3 No post-determination monitoring is perceived necessary. To comply with guidance set out in BS42020:2013, a Construction Environment Management Plan (CEMP) which includes consideration of biodiversity can be produced prior to the commencement of construction activities, including site clearance works. A Landscape and Ecological Management Plan (LEMP) will also be produced prior to operation of the site. A Habitat Management and Monitoring Plan (HMMP) may also be requested to secure long-term habitat creation/enhancement.

6.0 Conclusion

- 6.1.1 Subject to the findings of a separate Air Quality Road Emissions Screening Assessment, this report has demonstrated that, if the outlined mitigation measures are implemented in full, no significant residual impact could be expected, and the proposed application will result in 'no net loss in biodiversity,' whilst also providing opportunities for 'biodiversity net gain' in accordance with NPPF and Local Planning Policy.

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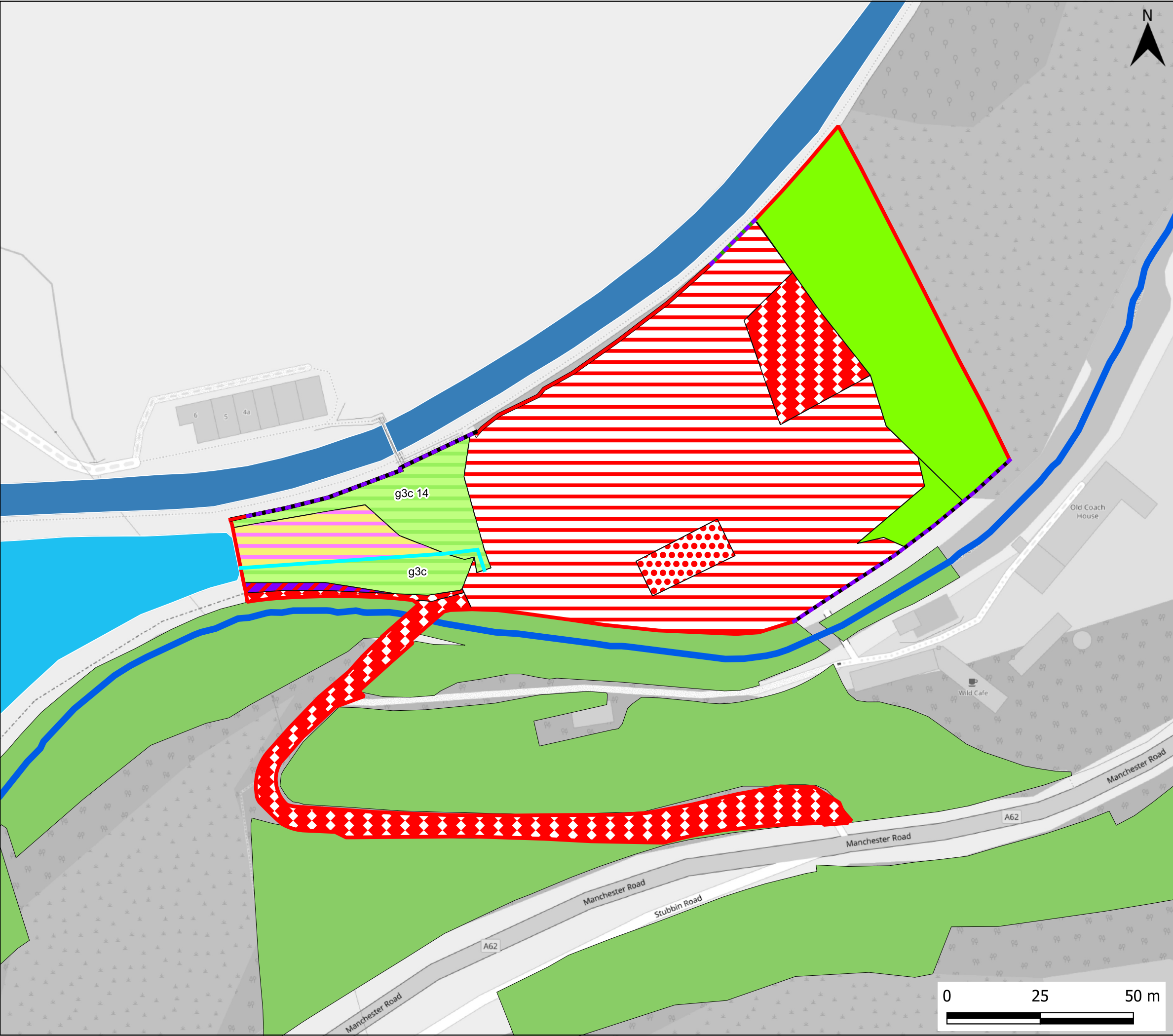
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Drawings – UK Habitat Classification Map



- Key:**
- Redline Boundary
 - Culvert (u1 851)
 - Built linear features (u1e)
 - Other rivers and streams (r2b)
 - Species-rich native hedgerow with trees (h2a5 11)
 - Other native hedgerow with trees (h2a6)
 - Reedbeds (f2e)
 - Other neutral grassland (g3c)
 - Other neutral grassland with scattered rushes (g3c 14)
 - Modified grassland (g4)
 - Willow scrub (h3j)
 - Buildings (u1b5)
 - Other developed land (u1b6)
 - Vacant or derelict land (u1f)
 - Cellars Clough Reservoir
 - Lowland Mixed Deciduous Woodland Habitat of Principal Importance
 - Huddersfield Narrow Canal Local Wildlife Site (LWS)
 - River Colne

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P02	11/08/25	Areas updated	LW	KS	KS
P01	02/07/2025	Preliminary Issue	SD	KS	KS

Project
Marsden Island

Client
Citu Group Developments

Drawing Title
UK Habitat Classifications Map

Scale	Date	Status
1:1000 @ A3	11/08/2025	Preliminary

DWG No.	Revision
SHF9022001-ENZ-XX-XX-DR-Z-0001	P02

Bristol

01454 269 237

Manchester

0161 413 6444

Sheffield

0114 321 5151

Cardiff

02920 023 700

Cambridge

01799 542 473

Belfast

07377673948

enzygo

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enzygo.com
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Appendix A – Proposed Site Layout

total homes = 75

mix

2 beds = 29

3 beds = 36

4 beds = 10

car parking = 117

bike spaces = 206

Sandhill
Cottages

proposed site plan

WIP 19.0.25

REVISIONS

1:250 / 1:500 / 1:1000 0 5/10/20 10/20/40 15/30/60 20/40/80
1:50 / 1:100 / 1:2000 0 1/2/4 2/4/8 3/6/12 4/8/16

Drawing Number
ML-CITU-PP003
Title
proposed site plan

Scale @ A1 Revised by Rev
1 : 250

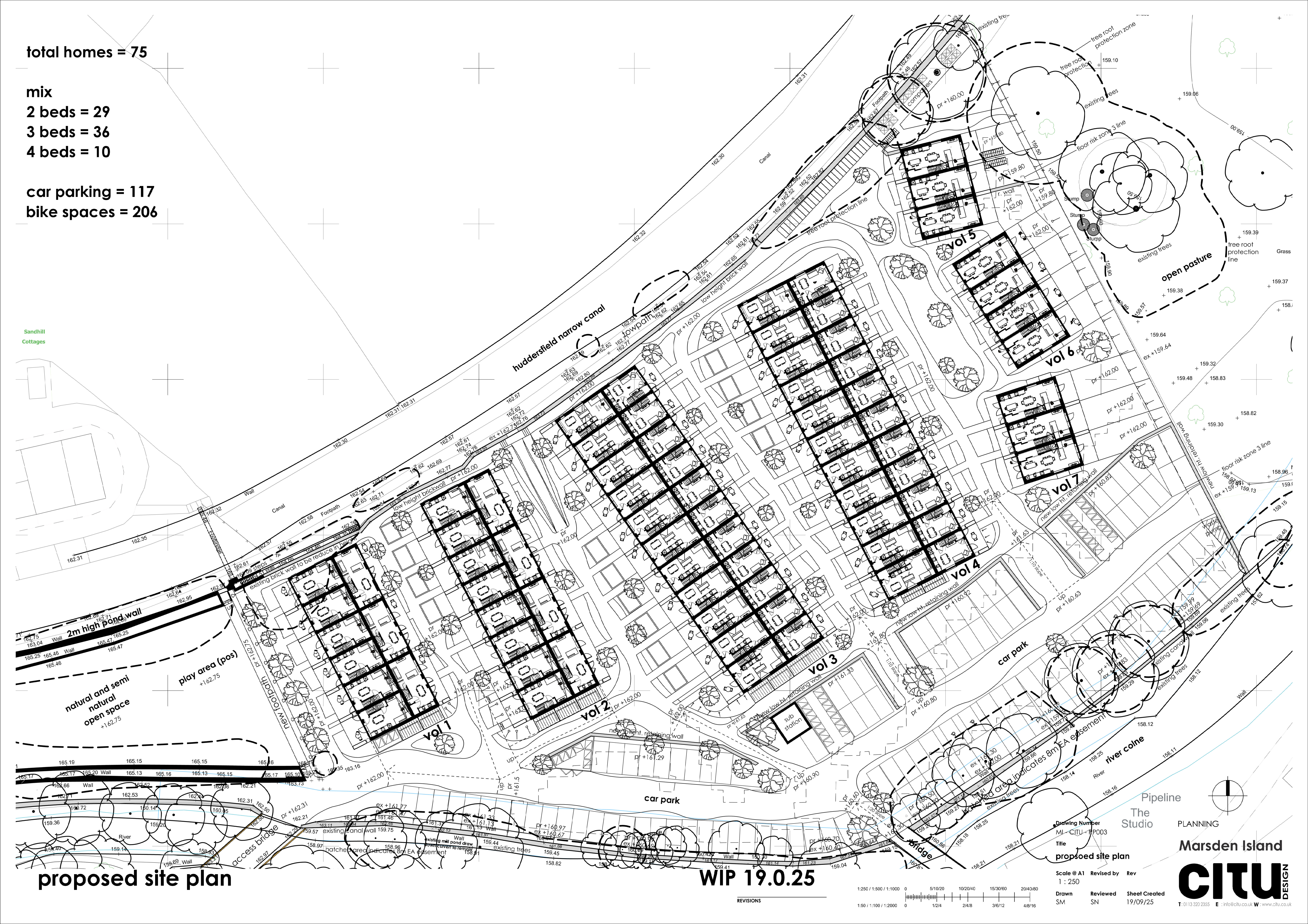
Drawn SM Reviewed SN Sheet Created 19/09/25

Pipeline
The Studio

PLANNING

Marsden Island

CITU DESIGN
T: 0113 320 2355 E: info@citu.co.uk W: www.citu.co.uk



Appendix B – River MoRPh Condition Assessment Report

Ecology Survey

**Biodiversity Metric MoRPh Assessment of Watercourse
including
Water vole and White clawed Crayfish eDNA water sample
analysis**

on

Marsden Island, Huddersfield, HD7 6LY

October 2025

Project:	Marsden Island, Huddersfield, HD7 6LY Biodiversity Metric River MoRPh Assessment plus water vole and white clawed crayfish eDNA
Version:	V1, For Client Review
Version Date	V1 – October 2025
Prepared for:	Enzygo
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1 SUMMARY

- 1.1. A Modular River Physical Assessment (MoRPh Assessment) has been undertaken of three water courses at Marsden Island, Huddersfield, HD7 6LY (National Grid Reference: SE 0583 1251). The survey was undertaken to determine the condition of the water courses and inform a Statutory Biodiversity Metric Assessment undertaken by Enzygo to support a planning application for a proposed new development.
- 1.2. In addition samples of water from the water courses were taken to assess presence of white clawed crayfish and water vole eDNA, whilst a preliminary check for evidence of water vole was also undertaken where possible.
- 1.3. The Baseline Survey and eDNA sampling were completed on the 26th September 2025 by Dr Rosalind King, MCIEEM. Dr King has over 18 years' experience as an Ecological Consultant in the private and public (Local Authority) sectors including 6 years' experience undertaking BNG Assessments using the Natural England Statutory Biodiversity Metric.
- 1.4. The onsite stream is considered to be a **Type K river**, which is a straight – sinuous river with very few meanders, and a silt bed indicating slow flow with high levels of deposition. The watercourse is 10 cm deep on average, although deeper where it flows into the site from the west. In this area marshy habitat is also present and was inundated at the time of survey. The stream was rapidly flowing through a channel of silt, which had likely accumulated when the area was a former mill pond. The area is densely vegetated with reeds which are shading the channel.
- 1.5. Assessed using the Cartographer database, the onsite watercourse is classified as being in **Fairly Good** Condition (score of **1.287**). The watercourse could qualify for 'overdeep' adjustment. However the shape value is above 6 (12.766), which means the water course is not 'overdeep' and thus the condition remains as Fairly Good. Taking into account other metric factors such as strategic significance and encroachment, the onsite stream comprises **1.13 River units** for the estimated 70 m stretch that runs within the site.
- 1.6. The off-site River Colne to the south of the site is considered to be a **Type C water course** which is a straight – sinuous river with very few meanders, and a boulder / cobble bed indicating active flow with low levels of deposition. The Huddersfield Narrow Canal does not require a water course type given it is a navigable canal. The River Colne is considered to be in **Moderate** condition whilst the canal is in **Fairly Poor** condition.
- 1.7. The Colne comprises **1.28** watercourse units for the 230 m stretch within 10 m of the red line boundary and the canal **0.59** watercourse units for the 200 m stretch within 10 m of the red line boundary when strategic significance and encroachment are considered.
- 1.8. Low numbers of individual Himalayan balsam (*Impatiens glandulifera*), were noted along the banks of all water courses. Two stands of Japanese knotweed (*Reynoutria japonica*) were noted on the north bank of the Colne adjacent to the southern site boundary wall. No giant hogweed (*Heracleum mantegazzianum*) was noted along water courses surveyed, nor were aquatic invasive non-native species noted.
- 1.9. The proposals include housing within 10 m of the southern bank of the canal which will increase the riparian encroachment in this area to 'major'. The riparian encroachment along the northern bank of the Colne can be considered to remain as 'minor' due to the area proposed to be vegetated despite also being car parking provision. The condition of both the canal and the Colne may be adversely impacted by the proposed bank top habitat changes. The onsite stream will be retained within the proposals, however it is not clear to what extent the habitats on the bank tops within 10 m of the bank side will be retained as natural compared to semi-natural open space.
- 1.10. Given the uncertainty of the proposals in terms of habitats and their management within 10 m of the onsite stream and off-site water courses, the metric has not been populated to determine unit change as a result of the proposals. This can be updated following further discussions and confirmation of the proposals. It is likely due to the presence of off-site water courses where condition improvement may not be feasible, a commuted sum would be required to ensure 10% net gain for the water course element of the metric.
- 1.11. In terms of water vole, no signs of latrines, droppings, lawns or burrows were noted in the 50 m section of on-site stream searched. However a full water vole survey was not undertaken and the full length of the stream was not surveyed in detail for water vole. Water vole DNA was not detected in water samples from the onsite stream, the Colne or the canal. Water vole are not considered to be present on-site or in the immediate vicinity of the site but as suitable habitats exist for water vole they may colonise in future.

Therefore update surveys or a pre-commencement check may be required should works on site be delayed by more than 18 months following this initial survey.

- 1.12. No DNA of white clawed crayfish was noted in the water samples taken. The habitat in the onsite stream is considered unsuitable for white clawed crayfish given the stream has a silty channel bed and not the habitat characteristics preferred by white clawed crayfish. Similarly the canal does not have high habitat suitability for white clawed crayfish. Thus white clawed crayfish need no further consideration in relation to the onsite stream or the canal.
- 1.13. The Colne does have suitable habitat for white clawed crayfish. If an outfall is proposed to the Colne further consideration may be required in terms of potential impacts of additional water discharge into the Colne should records of white clawed crayfish exist downstream.

2. INTRODUCTION

- 2.1. A River MoRPh Assessment has been undertaken of the three water courses at Marsden Island, Huddersfield, HD7 6LY (National Grid Reference: SE 0583 1251) as marked in Figure 2.1. The aim is to provide an assessment of the condition of the water courses in order to inform a Biodiversity Metric Assessment to support proposals for a new development in the vicinity.
- 2.2. The proposed development lies within 10 m of the River Colne and the Huddersfield Narrow Canal, whilst a stream that is unnamed lies within the red line boundary (hereafter referred to as the onsite stream). The Colne lies to the south of the development site whilst the canal lies to the north as shown in Figure 1.2.

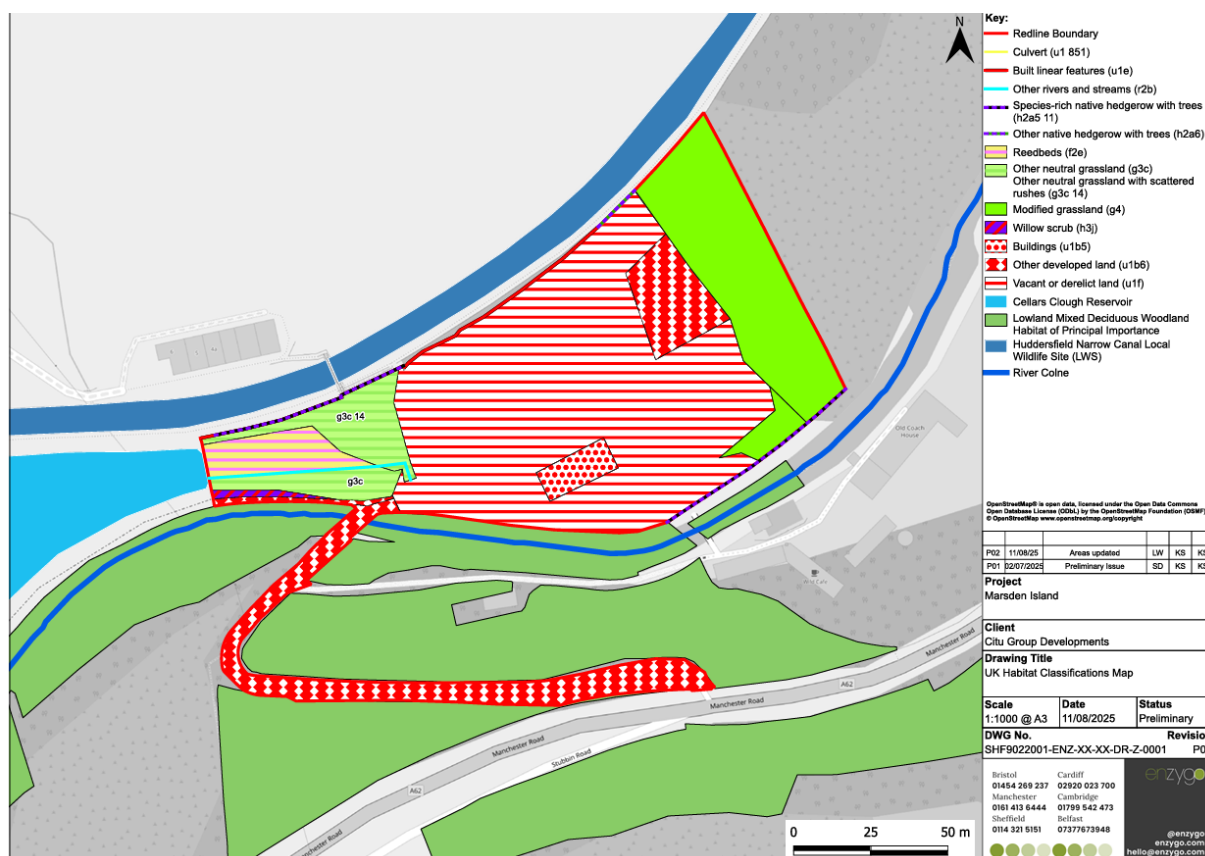


Figure 2.1: Red line boundary of the site. The water courses are marked as a turquoise line (onsite stream), wide blue line (Huddersfield Narrow Canal) and narrow blue line (River Colne). Drawing Number: SHF9022001-ENZ-XX-XX-DR-Z-0001 Rev: P02, 11/08/2025. Supplied by Enzygo September 2025.

- 2.3. The site was visited on the 26th September 2025, where the water course was assessed following MoRPh methodology and in accordance with Biodiversity Metric Principles. In addition a brief check for water vole along sections of the water courses was undertaken alongside sampling the water of the three water courses to assess for presence of water vole and white clawed crayfish DNA in the environment (eDNA).
- 2.4. This report sets out the baseline survey methods and results, including the baseline calculation of the river section of the Statutory Biodiversity Metric (July 2025 update). The initial assessment is a snapshot of current conditions and has not been compared to existing species records for the site or wider area.

3. METHODS

- 3.1. The condition of the water courses were assessed, following MoRPh¹ survey methodology. This method assesses the physical and ecological characteristics of the riparian environment to include land up to 10 m from the bank edge. The extent of modification of the channel is also assessed, together with influences from structures such as bridges along with invasive plant issues.
- 3.2. A minimum of five sections of water course are surveyed in the field, in order to cover at least 20% of the length of the water course. The length of each section surveyed is determined by the width of the water course under assessment, and is required to be at least two times the width of the channel. The onsite stream is only approximately 70 m long, therefore each sector was 10 m long in order to have the required minimum of 5 MoRPh sections surveyed. Thus a 50 m section of onsite stream was surveyed which exceeded the 20% requirement.
- 3.3. The Colne was on average 10 m wide therefore each sector was 20 m wide. In order to cover the required 20% of the watercourse total length, one sub reach was sampled, comprising 5 MoRPh surveys. This covered 100 m of the water course, which is approximately 43% of the 230 m water course that runs along the southern site boundary, thereby exceeding the 20% requirement.
- 3.4. Canals require each survey sector to be 50 m long. The length surveyed was 250 m which included all of the 200 m long sector that runs along the northern site boundary.
- 3.5. The length of the water courses was walked, with the sector for survey chosen based on ease of access, good visibility of the watercourse and being representative of the watercourse as a whole.
- 3.6. At each sector, the structure and features of the bank top (within 10 m of the bank) and the bank side were assessed for both banks. The assessment was undertaken from both banks where the water course was narrow and easily accessible (the onsite stream) or from one bank where this was not the case (The Colne and the Canal). The banks are named left and right when looking downstream as the survey moves from upstream to downstream. The structure and features of the channel were assessed including channel bed material, water flow type and vegetation in the channel.
- 3.7. The assessment of vegetation and features, together with results from a desk-based exercise that looks at river valley shape, gradient and river type, are combined by the Cartographer programme to determine the condition score of the water course. However in the case of canals, some features that contribute to river type are not required to inform the condition score (e.g. gradient). The programme takes this into account in the condition assessment.
- 3.8. The survey was undertaken by Dr Rosalind King, MCIEEM. Dr King has over 18 years' experience as a Private Ecological Consultant and Local Authority Ecologist including experience at undertaking surveys to inform Biodiversity Net Gain (BNG) proposals, and has been involved in this work since the initial stages of BNG. Dr King is registered to undertake the MoRPh River surveys (as part of Biodiversity Metric Habitat assessment of rivers). Dr King is also experienced in water vole surveys plus sampling water for eDNA analysis and assessing habitat suitability for white clawed crayfish.
- 3.9. The report is prepared based on the CIEEM Biodiversity Net Gain Report Template² as far as possible. However, as this report is prepared to inform a more detailed assessment of the site, following an ecological appraisal prepared by Enzygo, this report does not include reference to legislation, or other more detailed ecological surveys as this is believed to have been completed already.

¹ **Modular River Physical**

² CIEEM (2021). *Biodiversity Net Gain Report and Audit Templates* Chartered Institute of Ecology and Environmental Management, Winchester, UK.

- 3.10. The river element of the site was mapped using Magic Maps³ with reference to Google Earth imagery and maps provided by Enzygo.
- 3.11. The onsite water course was briefly assessed for water vole presence in a 50 m section following guidance outlined in the *Water Vole Conservation Handbook*, 3rd Edition. Wildlife Conservation Research Unit: Abingdon. The southern bank of the Colne was assessed in a 100 m section and the southern bank of the canal was assessed in a 250 m section also.
- 3.12. The watercourse banks were examined for the characteristic signs of water vole presence including droppings, latrines, feeding stations, burrows, 'mown lawns' around burrows, runs, and footprints. Signs of other small mammal use of the watercourse were also searched for along the bank sides and within 5 m of the bank top along the relevant sub section. Any signs were recorded on the survey forms within Appendix 2. A survey of the full water course was not undertaken in this instance.
- 3.13. Water samples were taken to check for presence of water vole and white clawed crayfish via eDNA analysis. This involved pooling 20 water samples taken from a stretch of the watercourse and subsampling up to 250 mL of the water. The subsample was passed through a filtration kit, which was then sent to SureScreen for analysis for water vole and white clawed crayfish eDNA. This process was repeated for each water course.
- 3.14. Weather conditions were also noted during the surveys as presented in Table 4.1, whilst general habitat conditions are discussed below. On this occasion a plant species list is not included as a list of species present is considered to already have been gathered by Enzygo.

Survey Limitations

- 3.15. The methods are consistent with national methods and in accordance with best practice. However, the results and conclusions set out in this report should be considered within the context of the survey limitations which are:
- **Access** - The onsite water course, although densely vegetated, was easily viewed for the entire length. Similarly for the Colne and the canal, although the water courses were surveyed from one bank only visibility was good and access is not considered a limitation to conclusions of this report
 - **Time of year** – the survey was undertaken in September 2025, within the optimal survey period for water course, water vole and white clawed crayfish assessment. The watercourses were not in spate, and the river bed material was clearly visible thus survey timing is not a limit to the conclusions of this report; and
 - **Surveyor skills** – the surveyor is a suitably qualified ecologist with good plant identification skills (FISC level 4) and experience in water vole surveys, eDNA sampling and white clawed crayfish ecology. A species list was not required for the assessment, but the surveyor was able to sufficiently identify species encountered within the survey area in order to complete the assessment.

³ <https://magic.defra.gov.uk/MagicMap.aspx>

4. BASELINE CONDITIONS

- 4.1. Weather conditions during the survey are set out in Table 4.1 and were suitable for this type of survey.

Table 4.1: Weather conditions during survey

Date	Time	Temperature (°C)	Cloud cover (%)	Wind (Beaufort Scale)	Conditions
26th September 2025	13:30 – 18:00	12	100	F0	Cool, dry, calm

- 4.2. The survey locations (dots) are shown on the aerial imagery map below (Figure 4.1) with the onsite stream and River Colne water courses marked in blue and the flow direction indicated by the blue arrow.

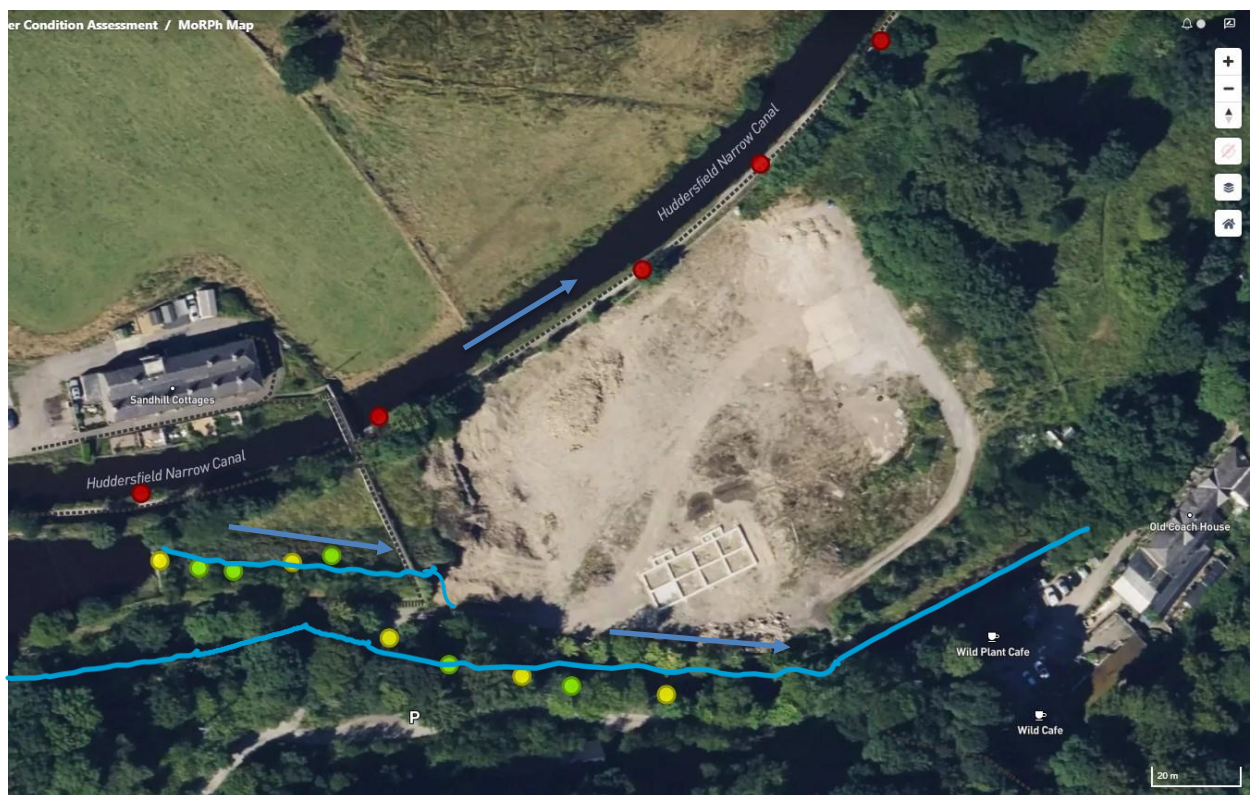


Figure 4.1: Aerial view of the survey area with the water courses demarcated in blue (arrow indicates flow direction) and the canal named in situ. The 5 cross section survey locations (MoRPH 1 to 5) are marked by various coloured dots for each water course. Map from Cartographer Copyright Mapbox, OpenStreetMap and Maxar.

- 4.3. All three water courses flow from west to east with the canal to the north of the site, the River Colne to the south of the site and the unnamed water course onsite in the western sector. The site location in relation to the wider area is shown in Figure 4.2.
- 4.4. The watercourses are assumed to fall under the strategic significance category of 'Location ecologically desirable but not in local strategy' and therefore be of 'medium strategic significance' within the Biodiversity Metric. If this is not the case the estimated credits would need to be adjusted accordingly.

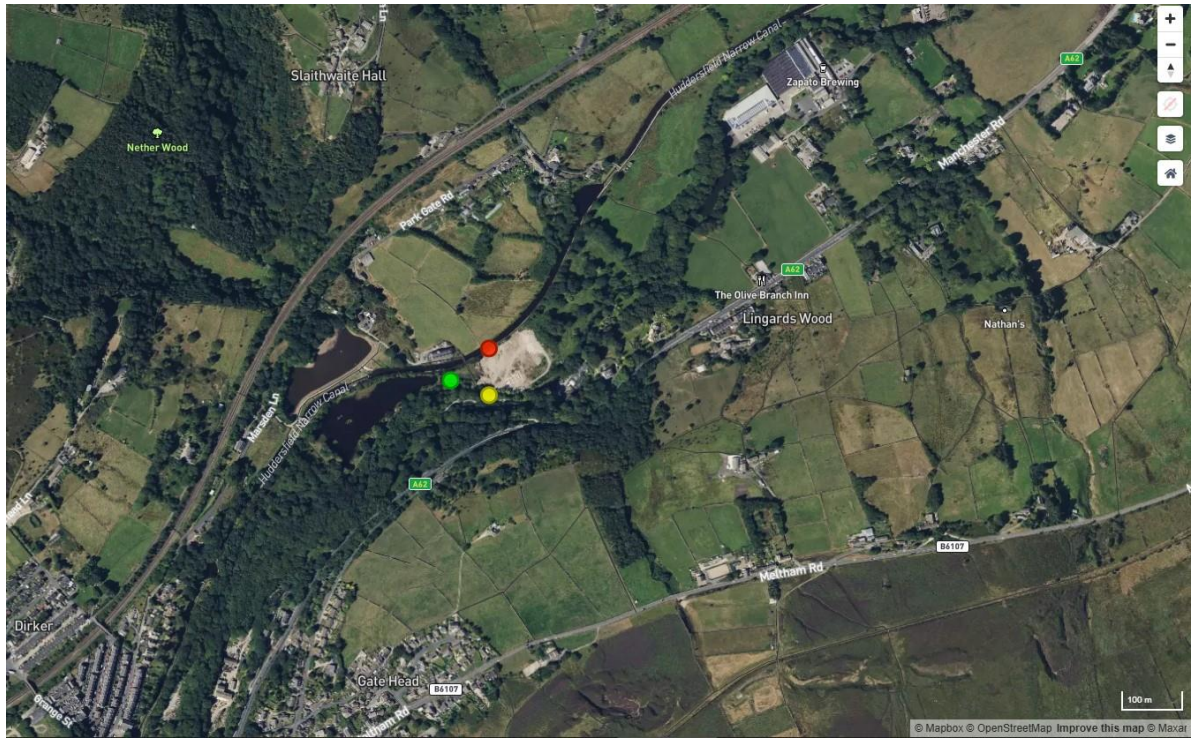


Figure 4.2: The location of the site marked by the green dot (onsite stream), yellow dot (River Colne) and red dot (Huddersfield Narrow Canal) in relation to the wider area. Map from Cartographer Copyright Mapbox, OpenStreetMap and Maxar.

- 4.5. The MoRPh methodology requires a minimum of three photographs to be taken at each of the survey sectors (modules). The photographs are taken from the mid-section of the survey point, one facing across the water course, one facing upstream and one facing downstream. As the sections of each of the three water courses surveyed were fairly similar in condition for the survey sector, photographs representative of the 5 MoRPh sectors for each water course are presented in Figure 4.3 to 4.7 below.



Figure 4.3: Left is the onsite stream showing the rapidly flowing but narrow water course surrounded by dense reed. Right is looking upstream along the Colne where the onsite stream can be seen as a tributary to the Colne entering via a culvert in the right of the photo (26.09.2025).



Figure 4.4: Looking downstream along the onsite stream towards the footbridge (26.09.2025).



Figure 4.5: Looking downstream along the Colne noting the boulders in the channel along with the reinforced banksides. Cars can be seen parked on the bank top indicating a degree of encroachment on the right bank (26.09.2025).



Figure 4.6: Looking north from the south bank of the Colne towards the site noting the berm-type feature with the stone wall that forms the southern boundary of the site. This wall also separates the rest of the 10 m riparian zone from the water. A small stand of Japanese knotweed is circled in the left of the photograph (26.09.2025).



Figure 4.7: Left looking south along the canal with the site on the right of the photograph beyond a wall. Right looking across the canal to the north bank where habitats are pasture and unmanaged grassland (26.09.2025).

- 4.6. As can be seen from Figures 4.3 and 4.4, the onsite stream runs through dense reed bed vegetation. At the time of survey the stream was rapidly flowing and shallow (10 cm for most of the length apart from near the area in the west where it emerged from a culvert where it was up to 40 cm deep). There were reeds and some trees on the bank tops along with inundated reed wetland areas towards the west where the channel bed was wider. The channel was mostly narrow and the channel bed was silt along with the bank sides. This layer of silt had likely accumulated when the area was a former mill pond. The mill pond had been drained sometime between 2009 and 2016 according to aerial imagery.
- 4.7. The River Colne channel bed comprised cobbles and pebbles with sand and some large boulders. The channel is wide (10 m on average) and shallow (20 – 30 cm deep) with rapid flowing water that included features such as upwellings, broken and unbroken standing waves, riffles and some areas of smooth flow (Figures 4.3 and 4.5). The bank tops are artificially realigned on the site side, (northern bank) with a wall set back from the water's edge meaning a narrow bank top potentially also functioning as a berm forms part of the 10 m riparian zone (Figure 4.6) whilst approximately 8 m of riparian zone lies beyond the 2 m high wall within the site red line boundary. This sector was former industrial use, but the buildings were being demolished from 2016, with none remaining by 2019. Subsequently grass and herb vegetation has colonised the site along with occasional scrub and saplings. The southern bank top of the Colne is partly road and parking, whilst the steeply sloping banksides and other areas of the bank top are woodland. There is some stone block reinforcement along the waters edge. The onsite stream runs into the River Colne through a culvert, and other water flows in further west from a pipe in the northern bank side.
- 4.8. The Huddersfield Narrow Canal is around 11 m wide with no perceptible flow and deep water (estimated to be over 1.5 m deep). The northern 10 m riparian zone comprise a few cottages, a grazed pasture and unmanaged grassland. The southern 10 m riparian zone comprises a recently constructed footpath with an approximately 1 m high wall separating the canal and footpath from the site.
- 4.9. When assessed using the Cartographer programme, the onsite stream is considered to be a **Type K river**, which is a straight – sinuous river with very few meanders and a silt bed indicating slow flow with high levels of deposition. The River Colne is considered to be a **Type C water course** which is a straight – sinuous river with very few meanders, and a boulder / cobble bed indicating active flow with low levels of deposition. The Huddersfield Narrow Canal does not require a water course type given it is a navigable canal.
- 4.10. In terms of Schedule 9 invasive non-native species, Himalayan balsam (*Impatiens glandulifera*), was noted along all water courses, although there were low numbers of individuals rather than dense stands. Two stands of Japanese knotweed (*Reynoutria japonica*) were noted on the north bank of the Colne as circled in Figure 4.6. No giant hogweed (*Heracleum mantegazzianum*) was noted along water courses surveyed.
- 4.11. Assessed using the Cartographer database, taking into account the field and desk-based data, the onsite stream is classified as being in **Fairly Good** Condition (score of **1.287**) (see excel file *Marsden Island MoRPh Pro River Condition RK 21.10.25*). The watercourse is a type K watercourse, which could qualify for 'overdeep' adjustment. However the shape value is above 6 (12.766), which means the water course is not 'overdeep' and thus the condition remains as Fairly Good (see excel file *Marsden Island Current and Proposed MoRPh data RK 21.10.25*).
- 4.12. The River Colne is considered to be in **Moderate** condition (score of **0.304**) whilst the canal is in **Fairly Poor** condition (score of **0.077**). Both have shape values greater than 6 so are not considered over deep. Full details are included in the excel files referenced above.
- 4.13. None of the water courses are marked as Priority Rivers on the Priority River Map (Defra). In terms of encroachment there is some parking and an access road on the southern bank of the Colne and a row of cottages on the northern bank of the canal along with the stone walls forming the site boundary. The site itself has revegetated following its former industrial use and is therefore not considered as a *'feature or intervention (within the riparian zone) that reduces the quantity, quality*

or ecological function of the riparian habitat'. However the walls forming the site boundary are considered to be features of bank top encroachment. Thus the bank tops of the onsite river are classed as 'minor/no encroachment', the Colne as 'major/minor' encroachment and the canal as 'moderate/minor' encroachment. For the onsite stream there is no encroachment of the water course, however due to the revetments the Colne and canal are considered to have major water course encroachment.

- 4.14. When considered as 'Fairly Good', and given the encroachment on the banks, the onsite stream comprises 1.13 watercourse units for the estimated 70 m stretch within 10 m of the red line boundary. The Colne comprises 1.28 watercourse units for the 230 m stretch within 10 m of the red line boundary and the canal 0.59 watercourse units for the 200 m stretch within 10 m of the red line boundary. See Metric excel file *Marsden Island Watercourse Metric RK 21.10.25* for details.
- 4.15. In terms of the water vole preliminary check no signs of latrines, droppings, lawns or burrows were noted in the 50m section of on-site stream searched or along on of the banks of the Colne or canal (Appendix 1). However a full water vole survey was not undertaken and the full length of the stream was not surveyed in detail for water vole. Water vole DNA was not detected in water samples from the onsite stream, the Colne or the canal (Appendix 2). Water vole are not considered to be present on-site or in the immediate vicinity of the site currently.
- 4.16. In terms of white clawed crayfish evidence the eDNA results returned no evidence of white clawed crayfish DNA in the samples (Appendix 2). Given the very shallow water and silty nature of the channel bed of the onsite stream it is considered the habitat is not very suitable for white clawed crayfish. Similarly the canal does not have high habitat suitability for white clawed crayfish. The Colne does have suitable habitat for white clawed crayfish as the channel bed is dominated by cobbles and pebbles with clear water and a rapid flow.

5. POST DEVELOPMENT AND POTENTIAL BIODIVERSITY ENHANCEMENTS

- 5.1. The proposals are detailed below in Figures 5.1 and 5.2. As the canal and Colne lie off-site is it considered enhancements to these water courses may not be feasible within the proposals so are not considered further within excel file *Marsden Island Current and Proposed MoRPh data RK 21.10.25*. In terms of the metric, the riparian encroachment will increase from minor to major along the southern bank of the canal due to the housing proposed in this area which will lead to a decrease in water course units. The riparian encroachment will remain as minor for the northern zone of the Colne as although parking is proposed in this area, it will be on a vegetated surface with grass reinforced system as support, so could be considered as providing a degree of riparian functionality. However given the walls are likely to remain following the proposals it is not considered feasible to reduce the level of encroachment on the riparian environments of the Colne.
- 5.2. The onsite stream will be retained, with the surrounding area being retained as natural and semi-natural open space. Without further details it is not possible to determine if the condition of the onsite stream will remain as current, however if the wetland, reedbed and other natural habitat features can be retained within 10 m of the banks of the onsite stream for its entire length, then it is possible the condition will remain as 'Fairly Good' following the development.
- 5.3. Enhancement suggestions for the onsite stream are provided in the excel file *Marsden Island Current and Proposed MoRPh data RK 21.10.25*. These include diversifying the bank top vegetation with appropriate tree and scrub species suited to wetland environments and including deadwood as habitat. Control of Himalayan balsam would also aid in improving the condition score. Coir rolls could be considered along the waters edge to provide a structure on which to plant vegetation to diversify the vegetation types in this area (currently mostly 'tall herbs / grasses'). However the channel is fairly narrow so this may not be feasible. These improvements could rise the condition score from 1.287 to 2.162. It is not clear if this would mean an increase in overall condition of the onsite stream to 'good' as the scoring system varies depending on water course

types. Thus the detailed proposals would need to be run through Cartographer in order to confirm any condition uplift.

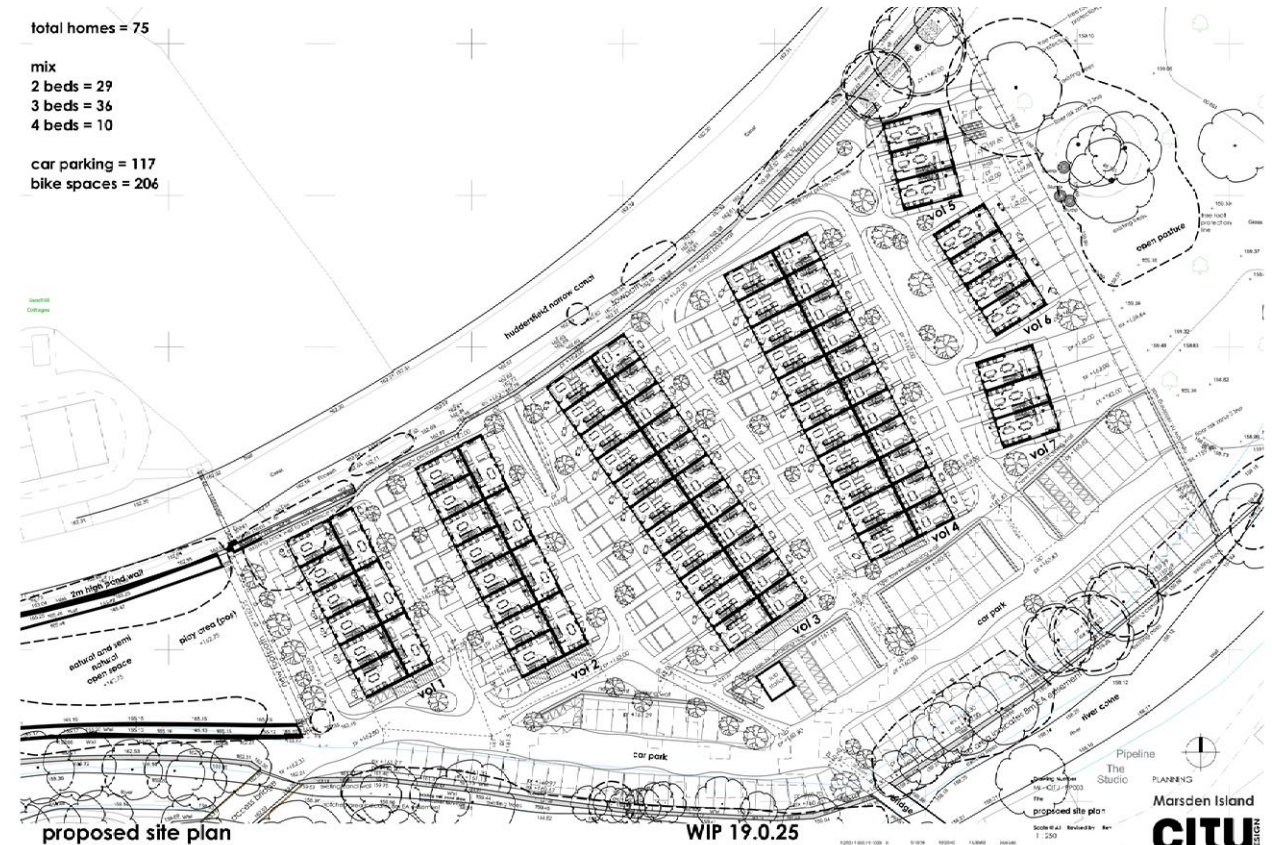


Figure 5.1: Proposals for the development on Marsden Island, Huddersfield. Drawing by CITU Design, Proposed Site Plan, dated 19/09/2025.



Figure 5.2: Landscape Plan for the development on Marsden Island, Huddersfield. Drawing by CITU Design, Landscape Plan, dated 19/09/2025.

- 5.4. Given the uncertainty of the proposals in terms of habitats and their management within 10m of the onsite stream, the metric has not been populated to determine unit change as a result of the proposals. This can be updated following further discussions and confirmation of the proposals.
- 5.5. It is likely due to the presence of off-site water courses where condition improvement may not be feasible, a commuted sum would be required to ensure 10% net gain for the water course element of the metric.
- 5.6. Water vole DNA was not detected in water samples from the onsite stream, the Colne or the canal. No evidence of water vole was noted in the sections of water course briefly surveyed. Water vole are not considered to be present on-site or in the immediate vicinity of the site but as suitable habitats exist for water vole they may colonise in future. Therefore update surveys or a pre-commencement check may be required should works on site be delayed by more than 18 months following this initial survey.
- 5.7. White claw crayfish DNA was not detected and habitats are of low suitability for this species onsite and within the canal. White clawed crayfish need no further consideration in relation to the onsite stream or the canal. However, the River Colne does have suitable habitat for white clawed crayfish. If an outfall is proposed to the Colne further consideration may be required in terms of potential impacts of additional water discharge into the Colne should records of white clawed crayfish exist downstream
- 5.8. It is recommended that any stands of Japanese knotweed within 7 m of the site boundary be controlled so as to avoid spread of this species on-site.

APPENDIX 1 – Water Vole Survey Forms

Water Vole Survey Form

General Information:

Recorder:	Dr Rosalind King	Watercourse Name/Number:	No name – Onsite Stream
Date:	26 th September 2025	Watercourse Catchment:	N/A
Project:	Marsden Island, Stubbins Road, Huddersfield, HD7 6LY	Locality / County:	
File Number:		Grid Reference:	SE 5074 1249
Distance Surveyed and Details:	50 m of a 70 m stretch	Water Authority:	N/A

Habitat Information:

Habitat Type:	Coast		Lake		Pond		Main River		Stream		Ditch		Canal		Bog/Marsh	
Shore Type:	Boulders		Stones	Gravel	Sand		Silt	Earth	Rock Cliffs	Earth Cliffs		Canalized		Poached		Reinforced
Current:	Rapid			Fast			Slow			Sluggish			Static			
Width:	<1m		1-2m		2-5m		5-10m		10-20m		20-40m		>40m			
Mean Depth:	<0.5m			0.5-1m			1-2m			>2m						
Bank Treatment:	Canalised				Maintained				Wild/Semi-Natural							
Bank Profile	Flat <10°			Shallow <45°			Steep >45°			Vertical/Undercut						
Bank Height	<0.5m			0.5-1m			1-2m			>2m						
Pollution:	Unpolluted			Domestic			Agriculture			Industrial						
Disturbance Factor:	1 (low)			2			3			4			5 (high)			
Bordering Land Use	Upland Grass	Permanent /Temporary Grass	Broad-leaved Woodland	Conifer Woodland	Peat Bog	Arable	Salt Marsh	Urban Industrial	Park Garden	Heath	Fen	Cattle Grazed	Bank Fenced			

Wildlife Information:

Water Vole	Rat	Otter	Mink	Other
☐ Sightings ☐ Latrines ☐ Burrows ☐ Footprints ☐ Pathways ☐ Feeding Remains ☐ Lawns	☐ Sightings ☐ Droppings ☐ Footprints ☐ Runs	☐ Sightings ☐ Spraint ☐ Footprints/Runs ☐ Holts/crouches	☐ Sightings ☐ Scat ☐ Footprints/Runs	☐ Kingfisher ☐ Heron ☐ Coot ☐ Waterfowl ☐ Moorhen ☐ Dipper ☐ Other (list):
No features noted.				

Vegetation (DAFORN):

Bankside Trees	F
Bushes	R
Herbs	D
Submerged Weed	N
Floating Weed	N
Emergents	N
Marginals – Reeds/Sedges/Rushes	D
Tall Grass	N
Short Grass	N

Water Vole Survey Form

General Information:

Recorder:	Dr Rosalind King	Watercourse Name/Number:	River Colne
Date:	26 th September 2025	Watercourse Catchment:	N/A
Project:	Marsden Island, Stubbins Road, Huddersfield, HD7 6LY	Locality / County:	
File Number:		Grid Reference:	SE 5803 1246
Distance Surveyed and Details:	100 m of a 230 m stretch	Water Authority:	N/A

Habitat Information:

Habitat Type:	Coast		Lake		Pond		Main River		Stream		Ditch		Canal		Bog/Marsh							
Shore Type:	Boulders		Stones		Gravel		Sand		Silt		Earth		Rock Cliffs		Earth Cliffs		Canalized		Poached		Reinforced	
Current:	Rapid				Fast				Slow				Sluggish				Static					
Width:	<1m			1-2m			2-5m			5-10m			10-20m			20-40m			>40m			
Mean Depth:	<0.5m					0.5-1m					1-2m					>2m						
Bank Treatment:	Canalised							Maintained							Wild/Semi-Natural							
Bank Profile	Flat <10°					Shallow <45°					Steep >45°					Vertical/Undercut						
Bank Height	<0.5m					0.5-1m					1-2m					>2m						
Pollution:	Unpolluted					Domestic					Agriculture					Industrial						
Disturbance Factor:	1 (low)				2				3				4				5 (high)					
Bordering Land Use	Upland Grass	Permanent /Temporary Grass	Broad-leaved Woodland	Conifer Woodland	Peat Bog	Arable	Salt Marsh	Urban Industrial	Park Garden	Heath	Fen	Cattle Grazed	Bank Fenced									

Wildlife Information:

Water Vole	Rat	Otter	Mink	Other
☐ Sightings ☐ Latrines ☐ Burrows ☐ Footprints ☐ Pathways ☐ Feeding Remains ☐ Lawns	☐ Sightings ☐ Droppings ☐ Footprints ☐ Runs	☐ Sightings ☐ Spraint ☐ Footprints/Runs ☐ Holts/crouches	☐ Sightings ☐ Scat ☐ Footprints/Runs	☐ Kingfisher ☐ Heron ☐ Coot ☐ Waterfowl ☐ Moorhen ☐ Dipper ☐ Other (list):
No features noted				

Vegetation (DAFORN):

Bankside Trees	A
Bushes	O
Herbs	O
Submerged Weed	A
Floating Weed	A
Emergents	A
Marginals – Reeds/Sedges/Rushes	A
Tall Grass	R
Short Grass	O

Water Vole Survey Form

General Information:

Recorder:	Dr Rosalind King	Watercourse Name/Number:	Huddersfield Narrow Canal
Date:	26 th September 2025	Watercourse Catchment:	N/A
Project:	Marsden Island, Stubbins Road, Huddersfield, HD7 6LY	Locality / County:	
File Number:		Grid Reference:	SE 0576 1252
Distance Surveyed and Details:	250 m of a 200 m stretch	Water Authority:	N/A

Habitat Information:

Habitat Type:	Coast		Lake		Pond		Main River		Stream		Ditch		Canal		Bog/Marsh							
Shore Type:	Boulders		Stones		Gravel		Sand		Silt		Earth		Rock Cliffs		Earth Cliffs		Canalized		Poached		Reinforced	
Current:	Rapid				Fast				Slow				Sluggish				Static					
Width:	<1m		1-2m		2-5m		5-10m		10-20m		20-40m		>40m									
Mean Depth:	<0.5m				0.5-1m				1-2m				>2m									
Bank Treatment:	Canalised						Maintained						Wild/Semi-Natural									
Bank Profile	Flat <10°				Shallow <45°				Steep >45°				Vertical/Undercut									
Bank Height	<0.5m				0.5-1m				1-2m				>2m									
Pollution:	Unpolluted				Domestic				Agriculture				Industrial									
Disturbance Factor:	1 (low)				2				3				4				5 (high)					
Bordering Land Use	Upland Grass	Permanent /Temporary Grass	Broad-leaved Woodland	Conifer Woodland	Peat Bog	Arable	Salt Marsh	Urban Industrial	Park Garden	Heath	Fen	Cattle Grazed	Bank Fenced									

Wildlife Information:

Water Vole	Rat	Otter	Mink	Other
☐ Sightings ☐ Latrines ☐ Burrows ☐ Footprints ☐ Pathways ☐ Feeding Remains ☐ Lawns	☐ Sightings ☐ Droppings ☐ Footprints ☐ Runs No features noted	☐ Sightings ☐ Spraint ☐ Footprints/Runs ☐ Holts/crouches	☐ Sightings ☐ Scat ☐ Footprints/Runs	☐ Kingfisher ☐ Heron ☐ Coot ☐ Waterfowl ☐ Moorhen ☐ Dipper ☐ Other (list):

Vegetation (DAFORN):

Bankside Trees	O
Bushes	R
Herbs	D
Submerged Weed	A
Floating Weed	A
Emergents	A
Marginals – Reeds/Sedges/Rushes	O
Tall Grass	F
Short Grass	F

APPENDIX 2 – Water Vole and White Clawed Crayfish eDNA Results

A series of blue geometric shapes, including squares and rectangles with rounded corners, arranged in a pattern on the right side of the page.

Folio No: 4200-2025
Purchase Order: PO11164
Contact: Enzygo Ltd
Issue Date: 14.10.2025
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eDNA Report

Technical Report



Folio No: 4200-2025
Purchase Order: PQ11164
Contact: Enzygo Ltd
Issue Date: 14.10.2025
Received Date: 01.10.2025



eDNA Analysis

Summary

When aquatic organisms inhabit a waterbody such as a pond, lake or river they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm the presence or absence of the target species within the waterbody.

Results

Lab ID	Site Name	OS Reference	Target Species	Sample Integrity Check	Result	Positive Replicates
FK3744	Huddersfield Canal	SE 0577 1253	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0
FK3745	River Colne	SE 0578 1247	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0
FK3746	Marsden Island - On site, unnamed 70m	SE 0575 1249	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0

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Received Date: 01.10.2025



Matters affecting result: none

Reported by: Lauryn Jewkes

Approved by: Lauryn Jewkes

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Issue Date: 14.10.2025
Received Date: 01.10.2025



Methodology

Samples have been analyzed for the presence of target species eDNA following readily available and scientifically published eDNA assays and protocols.

The analysis is conducted in two phases. The sample first goes through an extraction process where the filter is incubated in order to obtain any DNA within the sample. The extracted sample is then tested via real-time PCR (also called q-PCR) for each of the selected target species. This process uses species-specific molecular markers (known as primers) to amplify a select part of the DNA, allowing it to be detected and measured in 'real time' as the analytical process develops. qPCR combines amplification and detection of target DNA into a single step. With qPCR, fluorescent dyes specific to the target sequence are used to label targeted PCR products during thermal cycling. The accumulation of fluorescent signals during this reaction is measured for fast and objective data analysis. The primers used in this process are specific to a part of mitochondrial DNA, only found in each individual species. Separate primers are used for each of the species, ensuring no DNA from any other species present in the water is amplified. If target species DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If target DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent the risk of false positive and false negative results. True positive controls, negative controls, and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared. Stages of the analysis are also conducted in different buildings at our premises for added security. SureScreen Scientifics Ltd is ISO9001 accredited and participates in Natural England's proficiency testing scheme for GCN eDNA testing.

Interpretation of Results

Sample Integrity Check: Laboratory Arrival:

When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results. Any samples which fail this test are rejected and eliminated before analysis.

Degradation and Inhibition check:

Analysis of the spiked DNA marker to see if there has been degradation or inhibition of the kit or sample, between the date it was made to the date of analysis. Degradation of the spiked DNA marker may indicate a risk of false negative results. If inhibition is detected, samples are purified and re-analyzed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result:

Presence of eDNA (Positive/Negative/Inconclusive)

Positive: DNA was identified within the sample, indicative of species presence within the sampling location at the time the sample was taken or within the recent past.

Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for species presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. Even a score as low as 1/12 is declared positive. 0/12 indicates negative species presence.

Negative: eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of species absence, however, does not exclude the potential for species presence below the limit of detection.

Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for species presence or absence.

Appendix C – Water Vole and White-clawed Crayfish eDNA Results

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eDNA Report

Technical Report



SureScreen Scientifics

eDNA Analysis

Summary

When aquatic organisms inhabit a waterbody such as a pond, lake or river they continuously release small amounts of their DNA into the environment. By collecting and analysing water samples, we can detect these small traces of environmental DNA (eDNA) to confirm the presence or absence of the target species within the waterbody.

Results

Lab ID	Site Name	OS Reference	Target Species	Sample Integrity Check	Result	Positive Replicates
FK3744	Huddersfield Canal	SE 0577 1253	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0
FK3745	River Colne	SE 0578 1247	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0
FK3746	Marsden Island - On site, unnamed 70m	SE 0575 1249	Water vole (Arvicola amphibius)	Pass	Negative	0
			White-clawed crayfish (Austropotamobius pallipes)	Pass	Negative	0

Folio No: 4200-2025
Purchase Order: PO11164
Contact: Enzygo Ltd
Issue Date: 14.10.2025
Received Date: 01.10.2025

Matters affecting result: none

Reported by: Lauryn Jewkes

Approved by: Lauryn Jewkes

Methodology

Samples have been analyzed for the presence of target species eDNA following readily available and scientifically published eDNA assays and protocols.

The analysis is conducted in two phases. The sample first goes through an extraction process where the filter is incubated in order to obtain any DNA within the sample. The extracted sample is then tested via real-time PCR (also called q-PCR) for each of the selected target species. This process uses species-specific molecular markers (known as primers) to amplify a select part of the DNA, allowing it to be detected and measured in 'real time' as the analytical process develops. qPCR combines amplification and detection of target DNA into a single step. With qPCR, fluorescent dyes specific to the target sequence are used to label targeted PCR products during thermal cycling. The accumulation of fluorescent signals during this reaction is measured for fast and objective data analysis. The primers used in this process are specific to a part of mitochondrial DNA only found in each individual species. Separate primers are used for each of the species, ensuring no DNA from any other species present in the water is amplified. If target species DNA is present, the DNA is amplified up to a detectable level, resulting in positive species detection. If target DNA is not present then amplification does not occur, and a negative result is recorded.

Analysis of eDNA requires scrupulous attention to detail to prevent the risk of false positive and false negative results. True positive controls, negative controls, and spiked synthetic DNA are included in every analysis and these have to be correct before any result is declared. Stages of the analysis are also conducted in different buildings at our premises for added security. SureScreen Scientifics Ltd is ISO9001 accredited and participates in Natural England's proficiency testing scheme for GCN eDNA testing.

Interpretation of Results

Sample Integrity Check: Laboratory Arrival:

When samples are received in the laboratory, they are inspected for any tube leakage, suitability of sample (not too much mud or weed etc.) and absence of any factors that could potentially lead to inconclusive results. Any samples which fail this test are rejected and eliminated before analysis.

Degradation and Inhibition check:

Analysis of the spiked DNA marker to see if there has been degradation or inhibition of the kit or sample, between the date it was made to the date of analysis. Degradation of the spiked DNA marker may indicate a risk of false negative results. If inhibition is detected, samples are purified and re-analyzed. Inhibitors cannot always be removed, if the inhibition check fails, the sample should be re-collected.

Result:

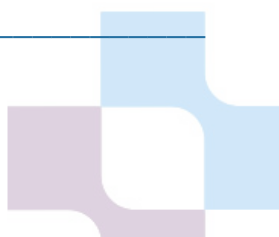
Presence of eDNA (Positive/Negative/Inconclusive)

Positive: DNA was identified within the sample, indicative of species presence within the sampling location at the time the sample was taken or within the recent past.

Positive Replicates: Number of positive qPCR replicates out of a series of 12. If one or more of these are found to be positive the pond is declared positive for species presence. It may be assumed that small fractions of positive analyses suggest low level presence, but this cannot currently be used for population studies. Even a score as low as 1/12 is declared positive. 0/12 indicates negative species presence.

Negative: eDNA was not detected or is below the threshold detection level and the test result should be considered as evidence of species absence, however, does not exclude the potential for species presence below the limit of detection.

Inconclusive: Controls indicate inhibition or degradation of the sample, resulting in the inability to provide conclusive evidence for species presence or absence.



Appendix D - Legislation and National Planning Policy

Wildlife legislation and policy relevant (or potentially relevant pending further survey) to the proposed works, based on the findings of the desk study and field survey are set out below. This legal information is a summary only, and the original legal documents should be consulted for definitive information.

Legislation Protection Afforded to Sites/Habitats that could Potentially be Affected by the Proposed Works

Designated Site/Habitat	Legal Status
Special Protection Areas (SPA)	SPAs are strictly protected sites classified in accordance with Article 4 of the EC Directive on the Conservation of Wild Birds (79/409/EEC), also known as the Birds Directive. They are classified for rare and vulnerable birds, listed in Annex I of the Birds Directive, and for regularly occurring migratory species. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2012 (as amended) are the legal instrument for implementing the Birds Directive in the UK.
Special Area of Conservation (SAC)	SACs are strictly protected areas which have been identified as best representing the range and variety within the European Union of habitats and (non-bird) species listed in Annexes I and II of the EC Habitats Directive. The Wildlife and Countryside Act 1981 (as amended) and the Conservation of Habitats and Species Regulations 2012 (as amended) are the legal instrument for implementing the Habitats Directive in the UK.
Sites of Special Scientific Interest (SSSI)	SSSIs are the national suite of sites providing statutory protection for the best examples of the UK's flora, fauna, or geological or physiographical features. Originally notified under the National Parks and Access to the Countryside Act 1949, SSSIs have been re-notified under the Wildlife and Countryside Act 1981 (as amended). Improved provisions for the protection and management of SSSIs were introduced by the Countryside and Rights of Way Act 2000.
Hedgerows	Hedgerows that meet certain criteria are protected by The Hedgerows Regulations 1997, under which it is an offence to remove or destroy such hedgerows without permission from the Local Planning Authority.

Legislation Protection Afforded to Species that could Potentially be Affected by the Proposed Works

Species	Legal Status
European Protected	
GCN, Bats	These animal species and their breeding sites or resting places are protected under Regulation 41 of the Conservation of Habitats and Species (Amendment) Regulations 2012, which makes it illegal to: - Deliberately capture, injure or kill any such animal or to deliberately take or destroy their eggs; - Deliberately disturb such an animal; - Damage or destroy a breeding site or resting place of such an animal. European Protected Species (EPS) licences can be granted by Natural England in respect of development to permit activities that would otherwise be unlawful under the Conservation Regulations, providing that the following 3 tests (set out in the EC Habitats Directive) are passed: - The development is for reasons of overriding public interest; - There is no satisfactory alternative; and - The favourable conservation status of the species concerned will be maintained and/or enhanced.

Species	Legal Status
	Under Regulation 9(5) of the Conservation Regulations, Planning Authorities have a legal duty to 'have regard to the requirements of the EC Habitats Directive in the exercise of their functions'. This means that they must consider the above 3 tests when determining whether Planning Permission should be granted for developments likely to cause an offence under the Conservation Regulations. As a consequence, Planning Applications for such developments must demonstrate that the 3 tests will be passed.
Nationally Protected	
GCN and Bats	These animals receive full protection under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any such animal; • Intentionally or recklessly damage, destroy or obstruct any place used for shelter or protection by any such animal; and • Intentionally or recklessly disturb such animals while they occupy a place used for shelter or protection.
Badger	The Protection of Badgers Act 1992 makes it illegal to wilfully kill or injure a Badger, or attempt to do so and also make it illegal to intentionally or recklessly interfere with a Badger sett. This includes damaging or destroying a sett, obstructing access to a sett and disturbing a Badger while it is occupying a sett. Licences can be granted to permit sett closure and/or disturbance between July and November inclusive.
Nesting Birds (general)	All wild birds are protected under the Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal (subject to exceptions) to: • Intentionally kill, injure or take any wild bird; • Take, damage or destroy the nest (whilst being built or in use) or eggs of any wild bird.
Common Reptiles (e.g. Viviparous Lizard, Grass Snake and Slow-worm)	These animals receive limited protection under The Wildlife and Countryside Act 1981 (as amended by the Countryside and Rights of Way Act 2000), which makes it illegal to intentionally kill or injure any such animal.
Wild Mammals	The Wild Mammals (Protection) Act 1996 makes it illegal to mutilate, kick, beat, nail, or otherwise impale, stab, burn, stone, drown, crush, drag or asphyxiate any wild mammal with intent to inflict unnecessary suffering.

Section 40 of the Natural Environment and Rural Communities Act 2006 (the NERC Act) places a legal duty on public bodies, including planning authorities, to 'have regard' to the conservation of biodiversity when carrying out their normal functions, which includes consideration of planning applications.

In compliance with Section 41 of the NERC Act, the Secretary of State has published a list of species and habitats considered to be of principal importance for conserving biodiversity in England under the UK Post-2010 Biodiversity Framework. This is known as the list of Habitats and Species of Principal Importance (HPI/SPI), of which there are 56 habitats and 943 species. The HPI/SPI list is used to guide planning authorities in implementing their duty under the NERC Act.

National Planning Policy

The NPPF (2024) set out the Government's planning policies for England and how these are expected to be applied. At the heart of the NPPF is a presumption in favour of sustainable development.

The NPPF states that:

'Planning policies and decisions should contribute to and enhance the natural and local environment by:

- protecting and enhancing valued landscapes, sites of biodiversity or geological value and soils (in a manner commensurate with their statutory status or identified quality in the development plan);
- recognising the intrinsic character and beauty of the countryside, and the wider benefits from natural capital and ecosystem services – including the economic and other benefits of the best and most versatile agricultural land, and of trees and woodland;
- maintaining the character of the undeveloped coast, while improving public access to it where appropriate;
- minimising impacts on and providing net gains for biodiversity, including by establishing coherent ecological networks that are more resilient to current and future pressures and incorporating features which support priority or threatened species such as swifts, bats and hedgehogs;
- preventing new and existing development from contributing to, being put at unacceptable risk from, or being adversely affected by, unacceptable levels of soil, air, water or noise pollution or land instability. Development should, wherever possible, help to improve local environmental conditions such as air and water quality, taking into account relevant information such as river basin management plans; and
- remediating and mitigating despoiled, degraded, derelict, contaminated and unstable land, where appropriate.

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.

To protect and enhance biodiversity and geodiversity, plans should:

- 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
- promote the conservation, restoration and enhancement of priority habitats, ecological networks and the protection and recovery of priority species; and identify and pursue opportunities for securing measurable net gains for biodiversity.

When determining planning applications, local planning authorities should apply the following principles:

- if significant harm to biodiversity resulting from a development cannot be avoided (through locating on an alternative site with less harmful impacts), adequately mitigated, or, as a last resort, compensated for, then planning permission should be refused;
- development on land within or outside a Site of Special Scientific Interest, and which is likely to have an adverse effect on it (either individually or in combination with other developments), should not normally be permitted. The only exception is where the benefits of the development in the location proposed clearly outweigh both its likely impact on the features of the site that make it of special scientific interest, and any broader impacts on the national network of Sites of Special Scientific Interest;
- development resulting in the loss or deterioration of irreplaceable habitats (such as ancient woodland and ancient or veteran trees) should be refused, unless there are wholly exceptional reasons and a suitable compensation strategy exists; and

- development whose primary objective is to conserve or enhance biodiversity should be supported; while opportunities to improve biodiversity in and around developments should be integrated as part of their design, especially where this can secure measurable net gains for biodiversity or enhance public access to nature where this is appropriate.

The following should be given the same protection as habitats sites:

- potential Special Protection Areas and possible Special Areas of Conservation;
- listed or proposed Ramsar sites; and
- sites identified, or required, as compensatory measures for adverse effects on habitats sites, potential Special Protection Areas, possible Special Areas of Conservation, and listed or proposed Ramsar sites.

The presumption in favour of sustainable development does not apply where the plan or project is likely to have a significant effect on a habitats site (either alone or in combination with other plans or projects), unless an appropriate assessment has concluded that the plan or project will not adversely affect the integrity of the habitats site.



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