

# Llanfair Weir Fish Pass

Salmon for Tomorrow 2

## Preliminary Ecological Appraisal

Natural Resources Wales

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## Quality information

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# 1 Introduction

## 1.1 Background

- 1.1 This Preliminary Ecological Appraisal (PEA) has been prepared by AECOM on behalf of Natural Resources Wales (NRW), to assess the ecological constraints in connection with proposed modifications to the existing weir within the River Elwy at Llanfair Talhaiarn, Conwy (hereafter referred to as the Scheme). The location of the Scheme, which is in North Wales, is shown by the blue star on Drawings S4T2-ACM-LERI-ZZ-MP-EG-100001 and S4T2-ACM-LERI-ZZ-MP-EG-100000 in Appendix A and is hereafter referred to as the Site.
- 1.2 The assessment of ecological constraints has been undertaken with reference to current good practice<sup>1</sup> and forms part of the technical information commissioned by NRW in connection with the Scheme. The PEA addresses relevant wildlife legislation and planning policy as summarised in [Appendix B](#) and is consistent with the requirements of *British Standard 42020:2013 Biodiversity. Code of Practice for Planning and Development*.
- 1.3 This PEA is intended for advice in respect of Scheme design, site layout and / or site investigation. Further ecological surveys and / or ecological impact assessment (including detailed mitigation measures) may be required in connection with a planning application or to contribute to an Environmental Impact Assessment once the Scheme proposals have been finalised and any required surveys have been completed.

## 1.2 The Site

- 1.4 The Site, which comprises the weir, is located within the River Elwy, approximately 250 m east, and downstream, of Llanfair Talhaiarn. The Site is situated at Ordnance Survey national grid reference SH 93052 70474.
- 1.5 The Site is bounded by ancient semi-natural broadleaved woodland to the south and farmland, scattered trees and a public right of way to the north.

## 1.3 The Scheme

- 1.6 The Scheme is part of a wider project which seeks to address existing fish pass issues across several sites in Wales, known as the Salmon for Tomorrow 2 programme. The weir at the Site is heavily degraded and partially collapsed, with an existing fish pass located within the centre of the structure which is functioning poorly. Options for the removal or full or partial replacement of the weir are being considered. Although unconfirmed at the time of this assessment, works may also include bank stabilisation and works access to the Site. Access to the Site is, however, considered likely to be via an existing entrance gate at the junction between the A544 and A548, through the farm field north of the Site.

## 1.4 Purpose of the Preliminary Ecological Appraisal

- 1.7 This PEA presents ecological information obtained during the following:

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<sup>1</sup> CIEEM (2017). *Guidelines for Preliminary Ecological Appraisal, 2nd edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

- A desk-study was undertaken in September and October 2020 to obtain records of designated sites, notable habitats<sup>2</sup> and protected and notable species<sup>3</sup> within 2 km of the Site (the area covered by the desk study is hereafter referred to as the Study Area); it is, however, noted that a search to identify any Special Areas of Conservation (SACs) (and potential SACs (pSACs) designated for bats was also undertaken within 10 km of the Site; and,
- An extended Phase 1 habitat survey of accessible land within and adjacent to the Site (the area covered by the survey is hereafter referred to as the Survey Area) was conducted on 14<sup>th</sup> September 2020.

1.8 The purpose of the PEA is to provide a high-level ecological appraisal of the Site, specifically to:

- establish baseline conditions and determine the presence of Important Ecological Features (IEF)<sup>4</sup> (or those that could be present), as far as is possible;
- to identify potential ecological constraints to the Scheme and make initial recommendations to avoid impacts on IEFs, where possible;
- to identify requirements for mitigation, where possible, including mitigation measures that will be required and those that may be required (depending on results of further surveys or final scheme design);
- to establish any requirements for more detailed surveys; and,
- to identify any opportunities offered by the Scheme to deliver biodiversity enhancements.

1.9 The methodology followed for undertaking the desk study and field surveys is detailed in Appendix C.

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<sup>2</sup>Notable habitats are taken as principal habitats for the conservation of biodiversity listed under Section 7 of the *Environment (Wales) Act 2016*; hedgerows identified as being 'important' under the wildlife criteria of the *Hedgerow Regulations 1997*, ancient woodlands and veteran trees.

<sup>3</sup>Notable species are taken as principal species for the conservation of biodiversity listed under Section 7 of the *Environment (Wales) Act 2016*; and any species listed in an IUCN Red Data Book.

<sup>4</sup> Important Ecological Features are habitats, species, ecosystems and their functions and processes that are of conservation importance and could potentially be affected by the Scheme.

## 2 Ecological Baseline, Constraints and Recommendations

- 1.10 The following sections detail the results of the desk and field-based studies undertaken to inform this PEA. Where necessary, recommendations are provided for mitigation measures to protect known IEFs, or further surveys to determine the presence or absence of likely IEFs.
- 1.11 With regard to background data, 'recent' records are considered to be those no older than 10 years from the date of the desk study.
- 1.12 Local Biodiversity Action Plans (LBAPs) for species and habitats do not formally exist for the county of Conwy, rather the species and habitats listed on Section 7 of the Environment (Wales) Act 2016 which occur within the country are used in place of LBAPs. Therefore, for the purposes of this assessment, the terms Conwy Principal Species and Conwy Principal Habitat are used to refer to such species and habitats.

### 2.1 Designated Sites

#### 2.1.1 Desk Study

- 1.13 Table 1 summarises the designated sites situated within the Study Area. These are shown on Drawing S4T2-ACM-LERI-ZZ-MP-EG-100000 in Appendix A. No other designated sites, including SACs within 10 km of the Site designated for bats, were identified during the desk study.

**Table 1. Designated Sites within Study Area**

Designated Site	Reason for Designation	Location of Designated Site <sup>5</sup>
Coedydd Derw Elwy (SSSI)	This site comprises several pockets of semi-natural broadleaved woodland situated on the bank of the River Elwy in Conwy. Throughout the woodlands, large amounts of standing and fallen deadwood can be found, which provides essential habitat for many species of lower plants, fungi and insects. The woodlands are also known to support a wide range of bird species, these include pied flycatcher, green and great spotted woodpecker and wood warbler which have all been recorded in the area.	1.05 km south-west of the Site
Local Wildlife Sites		
Afon Elwy (N1)	4.05 hectares (ha) of running water northeast of Site	Site within river north-east of the Site
Afon Elwy (N2)	2.58 hectares (ha) of running water southwest of Site	Site within river south of the Site
Coed y Crwn	2.21 ha of broadleaved woodland	0.30 km north-west of the Site
Pant-y-Chawarel	2.01 ha of broadleaved woodland	0.50 km south-west of the Site
Mynydd Bodran	53.6 ha of dry heath / acid grassland mosaic; bracken; acid grassland	0.55 km north-east of the Site
Pwll Llanfair Mine	0.03 ha of standing water	0.61 km east of the Site

<sup>5</sup>Where designated sites are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

Designated Site	Reason for Designation	Location of Designated Site <sup>5</sup>
Coed Mynydd Bodrochwyn	6.2 ha of broadleaved woodland	1.13 km north-east of the Site
Coedydd Nant Uchaf, Tai Duron, Nant Isaf (Candidate Site)	4.71 ha of broadleaved woodland	1.18 km south-west of the Site
Mynydd Bodrochwyn / Bron Heulog Heath	17.37 ha of dry dwarf shrub heath	1.18 km north of the Site
Mynydd Dir Heath	23.76 ha of dry dwarf shrub heath, acid grassland and bracken	1.22 km north-west of the Site
Coed Mawr Mynydd Dir	8.71 ha of broadleaved woodland	1.43 km west of the Site
Coed Mawr	6.67 ha of broadleaved woodland	1.49 km north-east of the Site
Llyn Garthewin	0.26 ha of standing water	1.56 km west of the Site
Nant Chwil	6.99 ha of broadleaved woodland	1.70 km east of the Site
Dyffryn Elwy	2.94 ha of running water southwest (upstream) of Site	1.76 km south-west of the Site
Coed Bedw	6.63 ha of broadleaved woodland	1.76 km north-east of the Site
Geuallt Isaf Wood	4.87 ha of broadleaved woodland	1.78 km north-east of the Site
Coed Mawr outlier	3.77 ha of broadleaved woodland	1.93 km west of the Site

## 2.1.2 Constraints and Recommendations

- 1.14 The Coedydd Derw Elwy Site of Species Scientific Interest (SSSI) is situated over 1 km south-west of the Site; furthermore, it is located upstream. Therefore, it is considered that the nature of the Scheme, and taking into account the geographical relationship between the Site and the SSSI, is not likely to result in any negative effects to the SSSI.
- 1.15 As there are no functionally linked statutory designated sites within the Study Area (specifically SACs, pSACs, Special Protection Areas (SPAs), possible SPAs (pSPAs) and Ramsar sites), it is not considered necessary for a Habitats Regulations Assessment to be undertaken.
- 1.16 Due to the nature of the proposed Scheme, and the distance to the majority of the Local Wildlife Sites within Table 1, it is not considered likely that there would be any adverse effects on these sites as a result of the Scheme. The weir is located within the River Elwy, which comprises two of the Local Wildlife Sites in Table 1, Afon Elwy (N1) and Afon Elwy (N2). Afon Elwy (N2) lies immediately upstream of the Site and therefore is unlikely to be adversely affected by the works and would in fact benefit from a more diverse fish population being able to reach this section of the river. Afon Elwy (N1) lies downstream of the Site and would not be permanently affected by the Scheme, and although the details of the proposed Scheme are not yet available, it is assumed that appropriate measures would be in place to prevent any temporary adverse effects during the works, such as following appropriate pollution prevention best practices as required for relevant permits working within the river.

## 2.2 Habitats

### 2.2.1 Desk Study

- 1.17 Table 2 summarises the records of notable habitats and protected or notable flora<sup>6</sup> (including veteran trees<sup>7</sup>) within the Study Area.

<sup>6</sup> For this assessment 'flora' includes: vascular and non-vascular plants, fungi and lichens.

<sup>7</sup> For this assessment the definition of a veteran tree is taken from Annex 2 of the National Planning Policy Framework (glossary): "A tree which, because of its great age, size or condition is of exceptional value for wildlife, in the landscape, or culturally."



**Table 2. Notable Habitats and Protected and Notable Flora within Study Area**

Habitat/ Flora Feature	Reason for Conservation Interest	Location of Habitat/ Flora <sup>8</sup>
Rivers	Conwy Principal Habitat	Site is within River Elwy
Hedgerows	Conwy Principal Habitat	270 m from Site
Marble screw-moss ( <i>Syntrichia papillosa</i> )	Conwy Principal Species	240 m from Site
Western gorse ( <i>Ulex gallii</i> )	Conwy Principal Species	446 m from Site
Dwarf neckera ( <i>Neckera pumila</i> )	Conwy Principal Species	1.83 km from Site

## 2.2.2 Field Survey

- 1.18 Summary descriptions of the habitats within the Survey Area are provided below and shown on Drawing S4T2-ACM-LERI-ZZ-MP-EG-100001, with specific features highlighted by TNs. TN descriptions and photographs are provided in Appendix D.
- 1.19 The Site comprises a concrete weir in a state of disrepair; this is located within the River Elwy, which flows north-west, away from Llanfair Talhaiarn (TN 1, Appendix D).
- 1.20 Immediately south of the Site lies a band of ancient semi-natural broadleaved woodland (TNs 5 and 6, Appendix D and shown on Drawing S4T2-ACM-LERI-ZZ-MP-EG-100001, Appendix A) – the ancient status of the woodland was determined during the desk study. The woodland comprises a mix of ash (*Fraxinus excelsior*), willow (*Salix* sp.), oak (*Quercus* sp.), alder (*Alnus glutinosa*), hawthorn (*Crataegus monogyna*) and rowan (*Sorbus aucuparia*) trees, with Himalayan balsam (*Impatiens glandulifera*) scattered within. Beyond the woodland, an area of tall ruderal is present, comprising creeping thistle (*Cirsium arvense*), common nettle (*Urtica dioica*), common hogweed (*Heracleum sphondylium*), bracken (*Pteridium aquilinum*) and Himalayan balsam throughout (TN 7, Appendix D). A further area of tall ruderal consisting of the same composition is located along the northern bank of the river (TNs 2 and 8, Appendix D). A small island of tall ruderal vegetation, surrounded by the stony banks and river, located on the northern bank contained a stand of Japanese knotweed (*Reynoutria* [formerly *Fallopia*] *japonica*) approximately 1.5 x 1 m (TN 4, Appendix D).
- 1.21 Scattered broadleaved trees of willow, alder, hawthorn, hazel (*Corylus avellana*), ash and rowan line the northern bank of the river, including one willow identified as having potential for roosting bats (TN 3, Appendix D). The farm field to the north of the Site comprises sheep-grazed improved grassland dominated by perennial rye grass (*Lolium perenne*). A single area of poor semi-improved grassland is situated between the Site and a boundary fence which delineates the farm field; thus, no grazing takes place within this grassland. In addition to some perennial rye-grass, species include cock's-foot (*Dactylis glomerata*), bent grass (*Agrostis* sp.), Timothy (*Phleum pratense*), Yorkshire fog (*Holcus lanatus*), common knapweed (*Centaurea nigra*), common nettle, dock (*Rumex* sp.), ragwort (*Senecio jacobaea*), dandelion (*Taraxacum* sp.) and Himalayan balsam scattered throughout.

## 2.2.3 Constraints and Recommendations

- 1.22 Records obtained as part of the desk study provide some indication of the presence of certain species. They do not, however, represent a definitive inventory of all species present within the Study Area. The inclusion of a species, or conversely the absence of a species does not necessarily mean that species remains present or absent beyond the time of that record.
- 1.23 Access to the ancient semi-natural woodland and other areas south of the river was not possible during the site visit and were viewed from the northern bank, using binoculars where necessary. Therefore, should it be necessary to undertake any works affecting the habitats south of the Site, a habitat condition assessment and, in the case of the woodland, a woodland flora survey is likely to be required and may need to involve a biodiversity net gain assessment should any habitat be removed.

<sup>8</sup>Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the designated site from the Site

- 1.24 The ancient semi-natural broadleaved woodland located to the south of the Site should be protected from visual and audible disturbance as much as possible; the use of physical screening should be considered. Works within this habitat should be avoided altogether as suitable mitigation cannot be implemented. Furthermore, works at night should be avoided and any artificial lighting used at any time should be directed only towards the necessary location of works and reduce light spill into the woodland and other areas of the river as much as possible.
- 1.25 Due to the location of the Scheme within the River Elwy, pollution prevention measures should be put in place for all elements of works, whether within or adjacent to the watercourse.
- 1.26 The farm field to the north of the Site is the field through which access is considered to be best placed, from both functionality and ecological perspectives. It is recommended that this option is used for access and the route should remain at least 30 m away from the treeline which borders the northern bank of the river for as long as possible, before bending round towards the location of the Site, in order to minimise potential disturbance to animals using the river or other habitats.

## 2.3 Invasive, Non-native Species

### 2.3.1 Desk Study

- 1.27 No records of invasive, non-native plant species (INNS) were returned as part of the desk study.

### 2.3.2 Field Survey

- 1.28 A full INNS survey was not undertaken as part of the site visit. However, a single stem of Japanese knotweed, approximately 1.5 x 1 m, was recorded within the island of tall ruderal vegetation described in Section 2.10 (TN 4, Appendix D) and Himalayan balsam was recorded as scattered throughout much of the tall ruderal and ancient semi-natural woodland within the Survey Area (TNs 2, 5, 6, 7 and 8, Appendix D). No other INNS were identified during the site visit.

### 2.3.3 Constraints and Recommendations

- 1.29 Due to the confirmed presence of Japanese knotweed and Himalayan balsam, particularly in close proximity to the River Elwy, it is recommended that a targeted invasive, non-native invasive species assessment (ISA) and management plan for the Site is undertaken to show due diligence and to avoid committing an offence in relation to listed invasive species (including Schedule 9 and Species of special concern and Schedule 2 species, as per The Invasive Alien Species (Enforcement and Permitting) Order 2019. Taken together, essentially, this legislation makes it an offence to plant, or otherwise cause to grow (including allowing to spread), listed plant species in the wild and if transported off site, there is a duty of care with regards to the disposal of any part of the plant that may facilitate establishment in the wild and cause environmental harm (as per the Environmental Protection Act 1990) including, whole plants, seeds, rhizomes, bulbs, corms and cuttings. The legislation also makes it an offence to release, or allow to escape, listed species into the wild (i.e. off-site).
- 1.30 Therefore, no methodology for removal should be undertaken without a full site investigation with regards to INNS and options appraisal to determine the most appropriate methodology to use to control this species within the Site and avoid further growth and/or spread. The ISA will assess the stands of Japanese knotweed and Himalayan balsam, and any other additional stands and other invasive species that may be present, and seek to identify sources and risks of spread. The associated Management Plan will follow best practice in terms of recommending appropriate control techniques which could include excavation, approved herbicide treatment or a combination of these and other techniques, some of which may require a number of treatments over more than one year/season. The stated methodology will also include appropriate biosecurity measures required to avoid the spread of this species during the treatment process, such as machinery checks and wash down areas.

## 2.4 Badger

### 2.4.1 Desk Study

- 1.31 There are no recent records of badger within the Study Area.

### 2.4.2 Field Survey

- 1.32 A targeted search for evidence of badger was not conducted during the site visit, although any evidence would have been recorded and Target Noted. However, no signs of badger presence were observed. The habitats within the Survey Area, particularly the woodland and field edges, are considered to offer potential for badgers, including foraging and potential for setts to be present

### 2.4.3 Constraints and Recommendations

- 1.33 Suitable habitat for badgers was identified within the Survey Area. Therefore, it is therefore recommended that a badger survey is undertaken within and up to no less than 30 m from the location of any works, once this has been determined. There may be very minor works within terrestrial habitat due to the nature of the project and this survey may be restricted to the works access to the river and compound locations.
- 1.34 Badger surveys can be undertaken throughout the year, although access and visibility can be restricted by dense vegetation. The optimum survey time is during spring or early autumn/winter when the animals are active but new vegetation growth is less likely to obscure field signs.
- 1.35 All suitable areas of habitat, together with fence-lines, would be systematically surveyed for evidence of badgers. Evidence of badgers includes:
- Sett entrances - holes characteristically at field edges, in hedgerows or on earth embankments marking the entrance to a sett; frequently accompanied by other field signs and mounds of earth (spoil);
  - Footprints – easily recognisable for being broader than they are long and often seen in recently dug earth or soft mud;
  - Badger trails through vegetation - badgers use the same routes within their territory, so the paths are usually well worn and obvious, being at least 20 cm in width and often linking feeding grounds with sett entrances;
  - Dung pits/latrines - found along territory boundaries and near to inhabited setts; pits are on average 15 cm across and 15 cm deep, and where dung pits are grouped together they are termed latrines;
  - Excavations – badgers often create shallow depressions to pass under fencing or push the fencing up to open up commuting routes;
  - Badger hair – coarse, black and white and hairs may be snagged when the badger slides under fencing or through vegetation with thorns;
  - Scratch marks – scratching poles can be found close to the sett entrance, with shredded or scored bark to a height between approximately 0.6 – 0.9 m; sometimes scratch marks can be seen on rocks in the spoil heap close to a sett entrance where they have been loosened by badgers;
  - Snuffle holes – excavated depressions in areas of bare earth where the badger has been searching for worms or insects;
  - Piles of old bedding (bracken, dead leaves and dry grass) in or near the entrance to a sett is a good sign that the sett is active or has been very recently; badgers can gather such bedding from up to 100 m away from the sett and trails of bedding can sometimes be seen along well-used badger trails; and,
  - Other signs – for example, sightings of live badgers or the remains of dead badgers close to setts or as road casualties.
- 1.36 If the survey identifies one or more active badger setts that could be disturbed or directly affected by the proposed works, a Natural Resources Wales licence and appropriate mitigation is likely to be required.

1.37 In summary, a Natural Resources Wales badger disturbance licence would be required for any activity that does not meet the following conditions:

- That there will be no harm to the badgers themselves;
- No disturbance of the badgers (above existing levels); and,
- No isolation, fragmentation or severance of the badger territory, and all other areas of a territory.

## 2.5 Bats

### 2.5.1 Desk Study

1.38 There are 23 recent records of bats within the Study Area. The closest of these records is approximately 419 m from the Site boundary. Eight species of bat are listed as Conwy Principal Species, these include: Barbastelle (*Barbastella barbastellus*), Bechstein's (*Myotis bechsteinii*), Noctule (*Nyctalus noctula*), common pipistrelle (*Pipistrellus pipistrellus*), soprano pipistrelle (*Pipistrellus pygmaeus*), brown long-eared (*Plecotus auritus*), greater horseshoe (*Rhinolophus ferrumequinum*) and lesser horseshoe (*Rhinolophus hipposideros*).

### 2.5.2 Field Survey

1.39 A targeted search for evidence of features potentially suitable for roosting bats was not conducted during the site visit, however, any features encountered were recorded and Target Noted. The habitats within the Survey Area, particularly the woodland and some individual trees, are considered to offer potential for roosting bats. The habitats are also considered to offer potential for foraging and commuting bats, particularly the woodland and River Elwy.

1.40 Table 3 summarises both the evidence of bats being present within the Survey Area, and the potential for features and habitats within the Survey Area to support bats.

1.41 Features and habitats in Table 3 are shown on Drawing S4T2-ACM-LERI-ZZ-MP-EG-100001 in [Appendix A](#). Photographs are provided in [Appendix D](#).

**Table 3. Summary of Bat presence/ potential presence within the Survey Area**

Feature	Description	Location <sup>9</sup>	Relevant Target Notes
Willow tree	Broken limb approximately 8 m up on east of trunk	Northern bank of River Elwy, just downstream of weir	TN3

### 2.5.3 Constraints and Recommendations

1.42 Potentially suitable features for roosting bats were identified during the survey. In addition to the willow tree detailed in Tables 3 and 4, it is considered possible that some of the trees within the woodland and scattered trees are of a suitable age and height to potentially contain features, such as cavities and broken limbs, suitable for roosting bats. Therefore, it is recommended that, once details of works locations are known and if any trees with the potential to support roosting bats are to be affected (including management), these features should be subject to a preliminary bat roost appraisal in accordance with standard guidance for bat surveys (Collins 2016<sup>10</sup> and BS 8596:205). The results of this assessment may lead to a requirement for further surveys, such as emergence/re-entry surveys and potentially the need for an NRW bat licence if a roost is confirmed within a tree that is unavoidable. The requirement for further surveys could be avoided with minor changes to access routes to avoid suitable trees if possible.

<sup>9</sup>Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the feature from the Site

<sup>10</sup> Collins, J. (ed.) (2016) Bat Surveys for Professional Ecologists: Good Practice Guidelines (3<sup>rd</sup> edn). The Bat Conservation Trust, London.

- 1.43 Suitable habitat for foraging bats was identified within the Survey Area, it is therefore recommended that works at night are avoided. However, if this is unavoidable, any artificial lighting used, including during low light levels in the daytime, should be minimised and only directed towards absolutely necessary (i.e. downward pointing) to reduce the potential impacts to foraging bats. Activity surveys for bats are not considered necessary as potential commuting or foraging areas are not being lost or fragmented as part of the Scheme.

## 2.6 Otter

### 2.6.1 Desk Study

- 1.44 There are five recent records of otter (*Lutra lutra*) within the Study Area. The closest of these records is approximately 163 m from the Site boundary. Otter is listed as a Conwy Principal Species.

### 2.6.2 Field Survey

- 1.45 A targeted search for evidence of otter was not conducted during the site visit, although any evidence would have been recorded and Target Noted; however, no signs of otter presence were observed. The habitats within the Survey Area, particularly the River Elwy and its banks, are considered to offer potential for commuting otter, and to a lesser extent foraging where deeper areas exist. There is also the potential for holts and/or resting up sites to be present.

### 2.6.3 Constraints and Recommendations

- 1.46 The River Elwy and potentially sections of its banks are considered to offer suitable habitat for otter. Therefore, an otter survey to determine whether this species uses the habitats within the Survey Area is likely to be required depending on the level of the proposed works.
- 1.47 A Natural Resources Wales otter disturbance licence may be required should evidence of otters be identified and if the works, once confirmed, are considered to affect otters directly (e.g. disturbance) or indirectly (e.g. modification of water levels or flow).
- 1.48 Otter surveys can be undertaken at any time of the year, but are most effective during drier spells as increased water-levels as a result of heavy and/or prolonged rain often wash away or cover evidence such as footprints and spraint (otter faeces). Evidence of otters includes:
- Holts - holes characteristically at watercourse edges, often with two to three holes (including one well above the water level) and a pile of logs/branches; frequently accompanied by other field signs, such as drag marks on nearby banks;
  - Footprints – usually distinctive and easily recognisable for having five visible toes, each with a teardrop shape and claw mark; often seen in mud and sand on riverbanks;
  - Otter paths/drag marks through vegetation – otters generally use the same routes within their territory, so the paths are usually well worn and obvious; such paths will often be most visible around the top and bottom of riverbanks and may be accompanied by claw or tail drag marks; and,
  - Spraint (faeces) and anal jelly – typically found on prominent features, such as rocks and logs, within the watercourse channel or close to the banks.

## 2.7 Water Vole

### 2.7.1 Desk Study

- 1.49 The desk study returned no recent records of water vole (*Arvicola amphibius*) within the Study Area, however they are known to be present within the wider area. Water vole is listed as a Conwy Principal Species.

## 2.7.2 Field Survey

- 1.50 A targeted search for evidence of water vole was not conducted during the site visit, although any evidence would have been recorded and Target Noted; however, no signs of water vole presence were observed. Some areas of habitats within the Survey Area are considered to offer suitable potential for water vole, particularly upstream of the Site where the flow rate is slower.

## 2.7.3 Constraints and Recommendations

- 1.51 The River Elwy and potentially sections of its banks upstream of the Site are considered to offer suitable habitat for water vole. Therefore, a water vole survey may be required depending on the level and extents of the proposed works. The survey could be conducted in conjunction with the otter survey and would determine whether this species uses the habitats within the Survey Area and whether any burrows are present within close proximity to the Site. The water vole survey should be undertaken in accordance with the Water Vole Conservation Handbook 3<sup>rd</sup> edition (2011) and the Water Vole Mitigation Handbook (2016), and should record any field signs of water vole 50 m upstream and 50 m downstream of the Site. The optimal survey period for water vole is between March and October, although earlier in the season is considered potentially more effective in areas where dense vegetation may obstruct visual access to the riverbank. Both banks should be surveyed, and the survey should not follow periods of heavy rain which could wash away field signs. Signs of water vole include:

- Latrines: recognisable by faeces size, shape, and content. If not too dried-out these are also distinguishable from rat droppings by their smell;
- Feeding stations: food items are often brought to feeding stations along pathways and hauled onto platforms. Recognisable as neat piles of chewed vegetation up to 10 cm long;
- Burrows: appear as a series of holes along the water's edge distinguishable from rat burrows by size and position;
- Lawns: may appear as grazed areas around land holes;
- Footprints: tracks may occur at the water's edge and lead into bank side vegetation. May be distinguishable from rat footprints by size; and,
- Runways in vegetation: low tunnels pushed through vegetation near the water's edge; these are less obvious than rat runs.

## 2.8 Other Notable Mammals

### 2.8.1 Desk Study

- 1.52 There are three recent records of other notable mammals<sup>11</sup> within the Study Area. These include two records of brown hare (*Lepus europaeus*) and one record of hedgehog (*Erinaceus europaeus*); the closest of the Hare records being approximately 1.1 km from the Site boundary. The hedgehog record is approximately 556 m from the Site boundary. Brown hare and hedgehog are listed as Conwy Principal Species.

### 2.8.2 Field Survey

- 1.53 No evidence of other notable mammal species was recorded during the site visit. However, the scrub, tall ruderal, hedgerow, woodland and grassland habitats are considered to offer some potential for foraging, resting and commuting hedgehog, whilst the improved grassland farm field is considered to offer limited potential for brown hare.

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<sup>11</sup>Notable mammals are taken as principal species for the conservation of biodiversity listed under Section 7 of the *Environment (Wales) Act 2016*; and any species listed in an IUCN Red Data Book.



## 2.8.3 Constraints and Recommendations

- 1.54 No further surveys are considered necessary for hedgehog or brown hare; however, any vegetation removal of habitats identified as being potentially suitable for these species should be done with care and a pre-clearance visual check (including a hand-search) should be undertaken.

## 2.9 Great Crested Newt

### 2.9.1 Desk Study

- 1.55 There are no recent records of great crested newts (*Triturus cristatus*) within the Study Area. Great crested newt is listed as a Conwy Principal Species.
- 1.56 One potential water body within 500 m of the Site was identified during a desk-based search; this was identified on mapping as a pond adjacent to a water treatment site approximately 130 m east of the Site. The River Elwy is not considered to be suitable for great crested newts due to its flowing nature<sup>12</sup>.

### 2.9.2 Field Survey

- 1.57 The habitats to the north of the Site are not considered likely to be used by great crested newt due to a lack of suitable waterbodies on this side of the river, and the river is considered to be a barrier to dispersal. The woodland and tall ruderal habitats on the southern side of the river are considered suitable for great crested newts; however, no suitable additional waterbodies were identified, potentially partly due to access limitations.

### 2.9.3 Constraints and Recommendations

- 1.58 An absence of records for great crested newts, in particular in this part of Conwy, and lack of potentially suitable waterbodies to the north of the Site are considered enough to conclude that this species is unlikely to be present north of the Site. However, as a precaution, should works (including access and compounds) be required within the terrestrial areas south of the Site, a visit to the potential pond identified southeast of the Site during the desk study will need to be undertaken to determine whether it is potentially suitable for great crested newts. Use of aerial photos of the Site indicates that this may be a dried mill pond, but would need on site verification as it is partially obscured by woodland, which could be done at any time. Should it be found to hold water, and depending on the level and location of the works a Habitat Suitability Index (HSI) assessment should be carried out following the methodology described in Oldham *et. al.*, (2000)<sup>13</sup> and, if considered potentially suitable, it is recommended that an environmental DNA (eDNA) sample is undertaken by a Natural Resources Wales great crested newt survey licence holder to determine the presence or absence of this species. The period during which eDNA survey can be carried out runs from 15<sup>th</sup> April to 30<sup>th</sup> June. The results of the eDNA survey may lead to the requirement for further surveys if the result is positive (i.e. confirming the presence of great crested newt) and, depending on the results of such surveys, an NRW licence may be needed.
- 1.59 Should it be possible to avoid works within terrestrial areas south of the Site, or the pond is confirmed as being dry, it is not considered necessary to undertake the HSI and potential eDNA survey on the pond described above or any other further mitigation work.

## 2.10 Other Notable Amphibians

### 2.10.1 Desk Study

- 1.60 A single record of a common frog (*Rana temporaria*), located approximately 580 m from the Site, was returned as part of the desk study. No other records of amphibians were provided within the desk study.

<sup>12</sup> Great crested newts do not generally like running water, though they will inhabit slow-flowing watercourses such as backwaters, ditches and canals.

<sup>13</sup> Oldham, R.S., Keeble, J., Swan, M.J.S. & Jeffcote, M. (2000) Evaluating the suitability of habitat for the great crested newt (*Triturus cristatus*). *Herpetological Journal* 10 (4), 143 – 155.

## 2.10.2 Field Survey

- 1.61 As detailed in Section 2.47 and 2.48, suitable breeding habitat for amphibians was not recorded north of the Site within the Survey Area, or 500 m of the Site during the desk study. However, a potential pond which was not accessible, which may be suitable for amphibians was identified during the desk study, approximately 130 m east of the Site, should it be confirmed to hold water. It is considered likely that the habitats within the Site are considered likely to be of limited value for occasional amphibians and in low numbers if present.

## 2.10.3 Constraints and Recommendations

- 1.62 It is considered that breeding habitat for amphibians is not present within 500 m of the north of the Site. Furthermore, the desk study and site visit results indicate the habitats within the Study Area and Survey Area, are considered to be of low importance to amphibians. Therefore, no targeted surveys for other notable amphibian species are considered necessary. However, to reduce the likelihood of impacts to individual amphibians potentially present within areas of works, care should be taken when removing any habitats, notably grassland, tall ruderal and scrub, which could be used by amphibians; for example, a hand-search for any animals immediately prior to vegetation clearance should be undertaken.

## 2.11 Reptiles

### 2.11.1 Desk Study

- 1.63 There are no recent records of reptiles within the Study Area. All four common species of reptile are listed as Conwy Principal Species, these include: slow worm (*Anguis fragilis*), common lizard (*Zootoca vivipara*), grass snake (*Natrix helvetica* [formerly *natrix*]) and adder (*Vipera berus*).

### 2.11.2 Field Survey

- 1.64 The tall ruderal, scrub and woodland habitats are considered to offer limited potential for common reptile species, such as common lizard, slow worm, grass snake and adder, but are not considered to be of the size and quality to be classed as optimal habitat or support populations of reptiles, but rather occasional individuals.

## 2.11.3 Constraints and Recommendations

- 1.65 Due to the limited amount of suitable habitat for reptiles and absence of desk study records, it is considered unlikely that reptile species are present within the Survey Area. Therefore, reptiles are not considered further in this assessment.

## 2.12 Birds

### 2.12.1 Desk Study

- 1.66 There are recent records for 64 notable<sup>14</sup> bird species within the Study Area. These include five species listed on Annex I of the EC Birds Directive, eight species listed on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), 59 species listed as Conwy Principal Species, 18 species on the Birds of Conservation Concern 4 (BoCC4) Red list, 16 species on the BoCC4 Amber list, 15 species on the BoCC Wales 3 Red list and 25 species on the BoCC Wales 3 Amber list.

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<sup>14</sup> Notable bird species are taken as those listed: on Annex I of the EC Birds Directive (2009/147/EC); on Schedule 1 of the Wildlife and Countryside Act 1981 (as amended); as species of principal importance for the conservation of biodiversity in Wales listed in Section 7 of the Environment (Wales) Act 2016; as Red or Amber in the Birds of Conservation Concern (BoCC) 4 (Eaton MA, Aebischer NJ, Brown AF, Hearn RD, Lock L, Musgrove AJ, Noble DG, Stroud DA and Gregory RD (2015). Birds of Conservation Concern 4: the population status of birds in the United Kingdom, Channel Islands and Isle of Man. *British Birds* 108, 708-746); and Red or Amber in the BoCC Wales (Johnstone I and Bladwell S (2016). Birds of Conservation Concern 3: the population status of birds in Wales. Pritchard, R [ed]. Vol. 13 No 1.



## 2.12.2 Field Survey

- 1.67 The habitats present within the Survey Area are considered likely to be of no more than local importance for common wintering bird species typical of woodland, grassland and fluvial habitats.
- 1.68 A breeding bird assemblage typical of the habitats present is considered likely. Furthermore nesting, kingfisher, dipper and grey wagtail could be supported by the habitats present and the River Elwy and its banks are considered to offer some foraging and breeding opportunities.

## 2.12.3 Constraints and Recommendations

- 1.69 Wintering birds are not considered to represent a constraint to the Scheme. However, the general measures provided below, where also suitable to non-breeding birds, should be followed.
- 1.70 Breeding birds are likely to be present within the Survey Area, therefore vegetation that may support breeding birds (e.g. woodland or scrub) which requires clearance, should be removed outside the nesting season (typically considered to be March to August, inclusive). If this is not possible, removal should be carried out under the watching brief of a suitably experienced ecologist. All bird nests are protected by the Wildlife and Countryside Act, 1981 (as amended). Should an occupied nest be found during the construction works, a buffer zone, the distance of which will need to be determined by the ecologist, will need to be incorporated to reduce the risk of the nest being abandoned by the birds, until the nest is no longer in use/dependent offspring have fledged.
- 1.71 A targeted survey to identify the presence of kingfisher is recommended. Kingfisher is listed under Schedule 1 of the Wildlife and Countryside Act, 1981 (as amended), meaning it is illegal to:
- Disturb any wild bird included on Schedule 1 whilst it is building a nest or is in, on or near a nest containing eggs or young; and/or,
  - Disturb dependent young of such a bird.
- 1.72 The survey should aim to identify any suitable cavities within the River Elwy banks or nearby trees in which kingfisher could nest. The survey should incorporate a search for any suitable nesting locations for dipper and grey wagtail.
- 1.73 It is recommended that works at night are avoided. However, if this is unavoidable, any artificial lighting used, including during low light levels in the daytime, should be minimised and only directed towards absolutely necessary (i.e. downward pointing) to reduce the potential impacts to breeding, sheltering and roosting birds.

### 3 Opportunities for Enhancements

- 1.74 The aim of the Scheme is to provide improvements for fish within the River Elwy. Enhancements for terrestrial species are likely to be limited as it is currently understood that works affecting terrestrial habitats are small in size and solely for the purposes of accessing the weir and are therefore likely to be temporary. Potential considerations during temporary works could include the installation of bat or bird boxes within suitable trees if permitted by the landowners, or if the bank itself is affected by the works and is suitable for doing so, then options for creating habitat for kingfisher or dippers could be considered when reinstating it, such as including kingfisher nesting tunnels. Creation of log piles in a suitable location as a refugia for various species could be included, using any logs from unavoidable tree removal/management. Furthermore, management to control/eradicate the stand of Japanese knotweed and areas of Himalayan balsam would provide enhancement of the area, including for native flora.

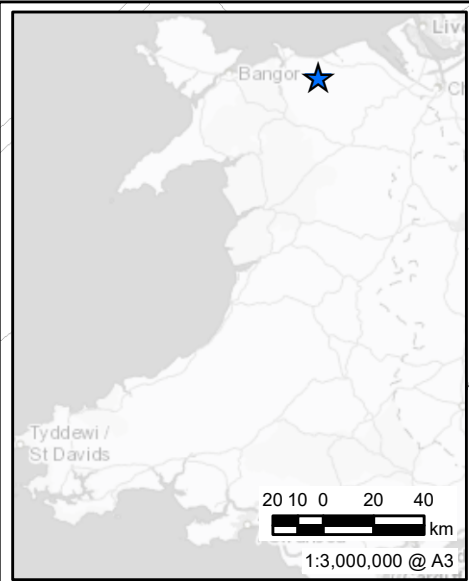
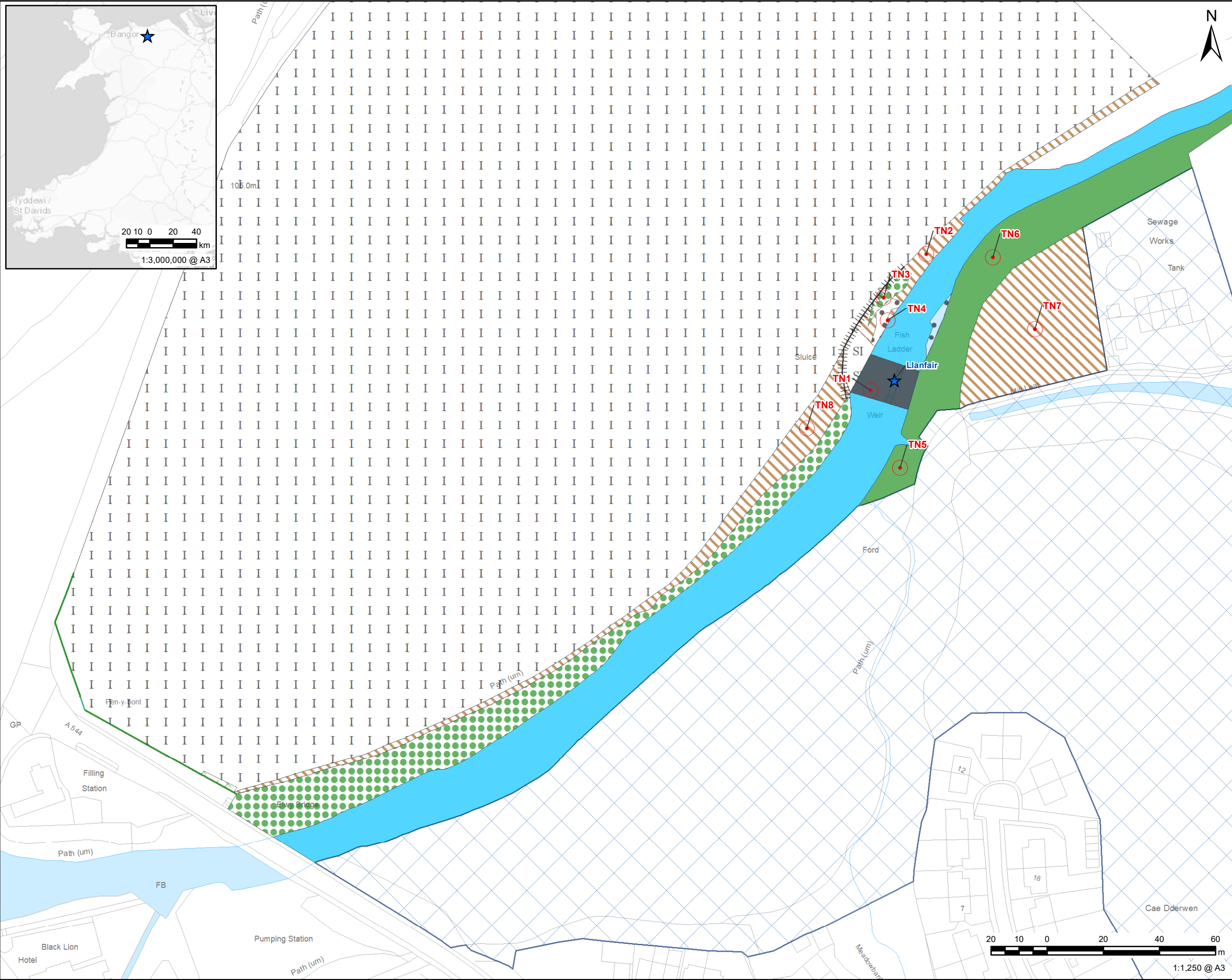
## 4 Conclusion

- 1.75 The desk study identified the presence of Coedydd Derw Elwy Site of Special Scientific Interest (SSSI) approximately 1.05 km south-west of the Site. No other statutory designated sites for nature conservation were present within the 2 km search radius from the Site. Furthermore, it was concluded that the Scheme would not result in any negative effects to the SSSI due to the distance and fact that the Site is located downstream of the SSSI. For the same reasons, it was concluded that a Habitats Regulations Assessment would not likely be necessary as there are no functionally linked statutory designated sites within the Study Area (specifically SACs, pSACs, Special Protection Areas (SPAs), possible SPAs (pSPAs) and Ramsar sites). A larger number of Local Wildlife Sites are present within the Study Area, however all but two are of sufficient distance to remain unaffected by the Scheme. Two sites, comprising Afon Elwy (N1) and (N2) cover the River upstream and downstream of the Site. It is anticipated that Afon Elwy (N2) being upstream would not be adversely affected by the Scheme and may benefit from a more diverse fish population, and that Afon Elwy (N1) being downstream of the Site would also not be adversely affected with appropriate mitigation in place. Records obtained as part of the desk study indicated a number of protected and notable species had been recorded within 2 km of the Site within that last 10 years.
- 1.76 In addition to the desk study, an extended Phase 1 habitat survey was undertaken on 14th September 2020 to record and map the habitats adjacent to the Site and determine whether any protected and/or notable habitats and species are present within the Survey Area. As a result, potential further survey/assessment has been recommended for the following species/groups depending on the nature and extent of temporary works, including associated access and site compound locations:
- Otter;
  - Water vole;
  - Badger;
  - Breeding kingfisher (to include dipper also);
  - Roosting bats (Preliminary Roost Appraisal) – primarily should any tree removal/management be required to access the river;
  - Great crested newt (should access be obtained from south of the river only); and,
  - Invasive non-native species.
- 1.77 In addition to further surveys, recommendations to mitigate any direct or indirect negative effects on the following species/groups:
- Birds (wintering and breeding);
  - Notable other mammals – specifically hedgehog and brown hare; and,
  - Foraging bats.
- 1.78 Furthermore, depending on the final works locations, there are recommendations to review this report in case impacts to the area of ancient semi-natural broadleaved woodland immediately south of the Site are likely.
- 1.79 As detailed designs of the exact nature and location of access and construction for the works were not available at the time of this assessment, it will need to be reviewed once these are confirmed to ensure the conclusions and recommendations remain fit for purpose. This includes potential access routes, and locations for site compounds should one be required. Similarly, should the final design result in indirect impacts, such as noise and visual, potential impacts to the areas of semi-natural broadleaved woodland southwest and immediately north of the Site, a habitat condition assessment and woodland flora survey may be required and may need to involve a biodiversity net gain assessment should any habitat be lost. Furthermore, works within the ancient semi-natural woodland habitat should be avoided altogether as suitable mitigation cannot be implemented.

## Appendix A – Figures







**PROJECT**  
SALMON FOR  
TOMORROW 2  
(S4T2) LOT 2

**CLIENT**  
Cyfoeth Naturiol Cymru  
Natural Resources Wales

Ty Cambria  
29 Newport Road, Cardiff  
CF24 0TP

**CONSULTANT**  
AECOM  
2 City Walk, Leeds  
LS11 9AR  
T:+44(0)-113-301-8400  
www.aecom.com

**LEGEND**

- ★ Fish Pass Location
- Area Not Accessed
- Phase 1 Habitat Features
- Target Note
- <all other values>
- J2.1.2 - Intact hedge - species-poor
- J2.4 - Fence
- A1.1.1 - Broadleaved woodland - semi-natural
- A2.2 - Scrub - scattered
- A3.1 - Broadleaved parkland/scattered trees
- B4 - Improved grassland
- B6 - Poor semi-improved grassland
- C3.1 - Other tall herb and fern - ruderal
- G2 - Running water
- J3.6 - Building / Structure
- J4 - Bare ground

**NOTES**

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**ISSUE PURPOSE**

FINAL

**PROJECT NUMBER**

60638079

**SHEET TITLE**

Llanfair TH Site  
Phase 1 Habitat Survey

**SHEET NUMBER**

S4T2-ACM-LLAN-XX-MP-EG-100001

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# Appendix B Relevant Wildlife Legislation and Planning Policy

## 4.1 Legislation

The legislation relevant to the protection of biodiversity interests includes:

- Environment (Wales) Act 2016;
- The Conservation of Habitats and Species Regulations 2017 (as amended);
- The Countryside and Rights of Way Act 2000;
- The Wildlife and Countryside Act 1981 (as amended);
- Hedgerow Regulations 1997; and,
- Protection of Badgers Act 1992.

Part 1 of the Environment (Wales) Act 2016 sets out the approach in Wales to planning and managing natural resources. Two key requirements are set out in Section 6 and Section 7. Section 6 of the Act places a duty on public authorities to 'seek to maintain and enhance biodiversity' so far as it is consistent with the proper exercise of those functions. In so doing, public authorities must also seek to 'promote the resilience of ecosystems'. The duty replaces the Section 40 duty in the Natural Environment and Rural Communities Act 2006 (NERC) Act 2006 in relation to Wales. Section 7 of the Act requires Welsh Ministers to publish, review and revise lists of living organisms and types of habitat which they consider are of key significance to sustain and improve biodiversity in relation to Wales. As such, the lists produced under Section 7 of this Act supersede both the UK Biodiversity Action Plan (UKBAP) priority species list and the subsequent lists of priority species and habitats produced under Section 42 of the NERC Act 2006.

The Conservation of Habitats and Species Regulations 2017 (as amended) consolidates all the various amendments made to the Conservation (Natural Habitats, &c.) Regulations 1994 in respect of England and Wales. The 1994 Regulations transposed Council Directive 92/43/EEC on the conservation of natural habitats and of wild fauna and flora (EC Habitats Directive) into national law and came into force on 30th October 1994. The Regulations provide for the designation and protection of European sites, the protection of European protected species, and the adaptation of planning and other controls for the protection of European sites. This provides protection to the habitats listed on Annex I and species listed in Annex II principally through the provision of a network of protected sites referred to as European sites, which includes SACs, pSACs, Special Protection Areas (SPAs) and possible SPAs (pSPAs), and also provides special protection to European protected species where they occur outside of the boundary of a Natura 2000 site.

The Countryside and Rights of Way Act 2000 places a duty on Government Departments and the National Assembly for Wales to have regard for the conservation of biodiversity and maintain lists of species and habitats for which conservation steps should be taken or promoted. Schedule 9 of the Act amends the provisions of the Wildlife and Countryside Act 1981 (as amended) in relation to the protection and management of SSSIs. The provisions extend powers for entering into management agreements; place a duty on public bodies to further the conservation and enhancement of SSSIs and increase penalties on conviction where the provisions are breached. Schedule 12 of the Countryside and Rights of Way Act 2000 amends the species provisions of the Wildlife and Countryside Act 1981 (as amended), strengthening the legal protection for threatened species.

The Wildlife and Countryside Act 1981 (as amended) is the major domestic legal instrument for wildlife protection in the UK and is the primary means by which the Convention on the Conservation of European Wildlife and Natural Habitats ('the Bern Convention') 1979 was implemented. This Convention aims to ensure the conservation of wild flora and fauna species and their habitats, particularly those that are endangered or vulnerable. Sections 28 to 33 of Part 2 of the Wildlife and Countryside Act 1981 (as amended) detail the law regarding the notification, confirmation, protection and management of Sites of

Special Scientific Interest (SSSIs). Schedule 9 contains measures for preventing the spread of non-native species which may be detrimental to native wildlife.

The legislative provisions for the protection of wild birds in the UK are contained primarily within Sections 1-7 of the Wildlife and Countryside Act 1981 (as amended) (W&CA). Under the W&CA, a wild bird is defined as any bird of a species that is resident in or is a visitor to (in a wild state) the European Territory of any member state. The W&CA makes it an offence to:

- Kill, injure or take any wild bird;
- Take, damage or destroy the nest of any wild bird while it is being built or in use; and
- Take or destroy the eggs of any wild bird.

Special penalties exist for offences related to species listed on Schedule 1, for which there are additional offences of disturbing these birds and / or their dependent young at their nests. For some species (included in Schedule ZA1 under the Natural Environment and Rural Communities (NERC) Act) it is offence to take, damage or destroy the nest even when the nest is disused. The W&CA requires the prosecuting authority to prove that an offence was intentional. However, the CROW Act strengthens the provisions of the W&CA by introducing an additional offence of “reckless” disturbance, which means that ignorance of the presence of a protected species cannot be used as a reliable defence should a breach of the W&CA be committed.

The Hedgerows Regulations 1997 provide protection to ‘important’ hedgerows from removal (up-rooting or otherwise destroying) without permission from the local planning authority. Various criteria specified in the Regulations are used to identify ‘important’ hedgerows for wildlife, landscape or historical reasons. Local planning authority permission is normally required before removing hedges that are at least 20m in length, more than 30 years old and which contain certain plant species.

Badgers are protected by the Protection of Badgers Act 1992 and listed under Annex II of the Bern Convention. The legislative measures are primarily aimed at protecting badgers from deliberate harm or injury.

## 4.2 Planning Policy

Local authorities have a duty to incorporate conservation measures for protected species into planning policy. In Wales, Planning Policy Wales, Edition 10, December 2018, along with a number of Technical Advice Notes (TANs), presents policies regarding development and planning applications<sup>15</sup>. The Conwy Local Development Plan 2007 – 2022, published in October 2013, sets out a series of policies relating to considerations required regarding protected species, habitats and landscapes. Policy NTE/3 – Biodiversity states that ‘*New development should aim to conserve and, where possible, enhance biodiversity through:*

- Sensitive siting; avoiding European protected sites or those of national or local importance;*
- Sensitive layout and design which avoids impacts or mitigates through an agreed programme for any identified adverse impact on biodiversity;*
- Creating, enhancing and managing wildlife habitats and natural landscapes including connectivity;*
- Integrating biodiversity measures into the built environment;*
- Contributing to achieving targets in the Conwy Local Biodiversity Action Plan (LBAP);*
- Providing for a management agreement with the Local Planning Authority to secure the retention and long term future of biodiversity interests where applicable.’*

It is noted that a Replacement Local Development Plan is currently being developed, although was not ready at the time of this assessment.

<sup>15</sup> <https://gov.wales/sites/default/files/publications/2019-02/planning-policy-wales-edition-10.pdf> accessed 06/10/2020.



## Appendix C Methodology

The method of appraisal followed the generally accepted best practice guidance from the Chartered Institute of Ecology and Environmental Management CIEEM 'Guidelines for Ecological Impact Assessment (EclA)' (Second Edition) 2016.

The desk study identified any statutory nature conservation designations within 2 km of the Site (i.e. the Study Area) and any local non-statutory nature conservation designations and protected and notable habitats and species within approximately 2 km of the Study Area. The search was extended to 10 km to identify any Special Areas of Conservation (SACs) or possible Special Areas of Conservation (pSACs) designated for bats.

The desk study was carried out using the following data sources:

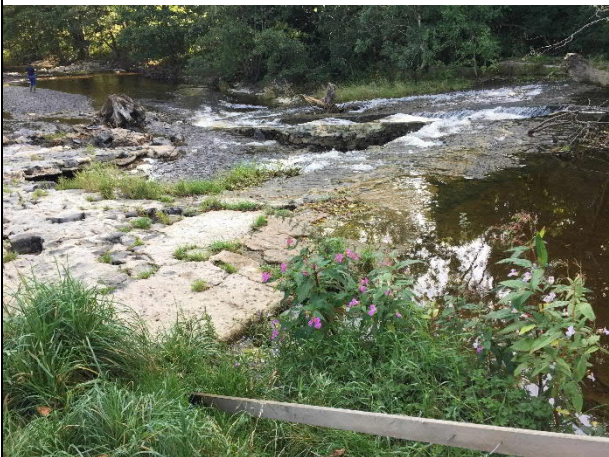


- Multi-Agency Geographic Information for the Countryside (MAGIC) website;
- Woodland Trust Ancient Tree Inventory;
- Local Biological Records Supplied by Natural Resources Wales, originating from the respective Local Environmental Records Centre;
- Ordnance Survey 1:2500 Pathfinder maps and aerial photography; and,
- Environment (Wales) Act 2016 Section 7.

The Phase 1 habitat survey was undertaken in accordance with the standard survey method (JNCC, 2010). Phase 1 habitat survey is a standard method of environmental audit. It involves categorising different habitat types and habitat features within a Survey Area. The information gained from the survey can be used to determine the likely ecological value of a site, and to direct any further survey work which may need to be carried out prior to the submission of a planning application. The standard Phase 1 habitat survey method can be "extended" to record target notes on protected, notable and invasive species.

An appraisal was made of the potential suitability of the habitats present to support protected and notable species of plants or animals. Field signs, habitat features with potential to support protected species and any sightings or auditory evidence were recorded when encountered; no detailed surveys were carried out for any particular species.




In addition, specific attention was given to identifying instances of invasive, non-native plant species listed in Schedule 9 of the Wildlife and Countryside Act, 1981 (as amended). Locations of plants or stands of any such invasive non-native plant species, if found, were recorded.

# Appendix D Photographs and Target Notes

Feature	Description	Location <sup>16</sup>	Relevant Target Notes	Photographs
Weir	Concrete weir in state of disrepair. Two dippers and a grey wagtail seen on arrival	Centre of Site within River Elwy	TN 1	
Himalayan balsam	Scattered throughout tall ruderal habitat	Various across Site	TNs 2, 7 and 8	 

<sup>16</sup>Where features are situated outside of the Site boundary, the distance and direction is given at the closest point of the feature from the Site



Feature	Description	Location <sup>16</sup>	Relevant Target Notes	Photographs
				
Willow tree	Broken limb approximately 8 m up on east of trunk	Northern bank of River Elwy, just downstream of weir	TN 3	
Japanese knotweed	Stand of approximately 1.5 x 1 m	Northern bank at edge of water	TN 4	

Feature	Description	Location <sup>16</sup>	Relevant Target Notes	Photographs
Woodland	Ancient semi-natural broadleaved woodland	Immediately south of Site on southern riverbank	TN 5	