

Ecological Impact Assessment of land  
at Hall Farm

Cruckmeole  
Hanwood  
Shropshire  
SY5 8JN

(SJ4330309877 - SJ4300909649)

By Churton Ecology  
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*Commissioned by Roger Parry and Partners*  
September 2023

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## **SUMMARY**

### *Background*

Churton Ecology was instructed to carry out an Ecological Impact Assessment of land at Hall Farm, Cruckmeole, Hanwood, Shropshire SY5 8JN.

The site comprises improved grassland, hedgerow, bare-ground, tall ruderal vegetation and a small section of stream. The proposal is for the formation of a new farm access track.

### *Method of study*

A desktop search and general protected species walkover of the site and surrounds aimed to establish the presence or absence of bats, Great Crested Newt, Otter, Water Vole, breeding birds and other protected species with potential to be negatively affected by the proposal. All survey activities were carried out by Mr Rob Thorne on 13/09/23.

### *Ecological features*

The site supports habitats of low to moderate biodiversity value. Hedgerow and birds (nesting) are considered to be important ecological features of the site.

### *Mitigation and enhancement measures*

With enhancements in place (planting new hedgerows and installing bat and bird boxes on nearby trees) there would be a maintainance or increase in the biodiversity value of the site.

# 1 INTRODUCTION

## 1.1 Background and site description

Churton Ecology was commissioned by Roger Parry and Partners LLP to carry out an Ecological Impact Assessment of land at Hall Farm, Cruckmeole, Hanwood, Shropshire SY5 8JN (SJ4330309877 - SJ4300909649).

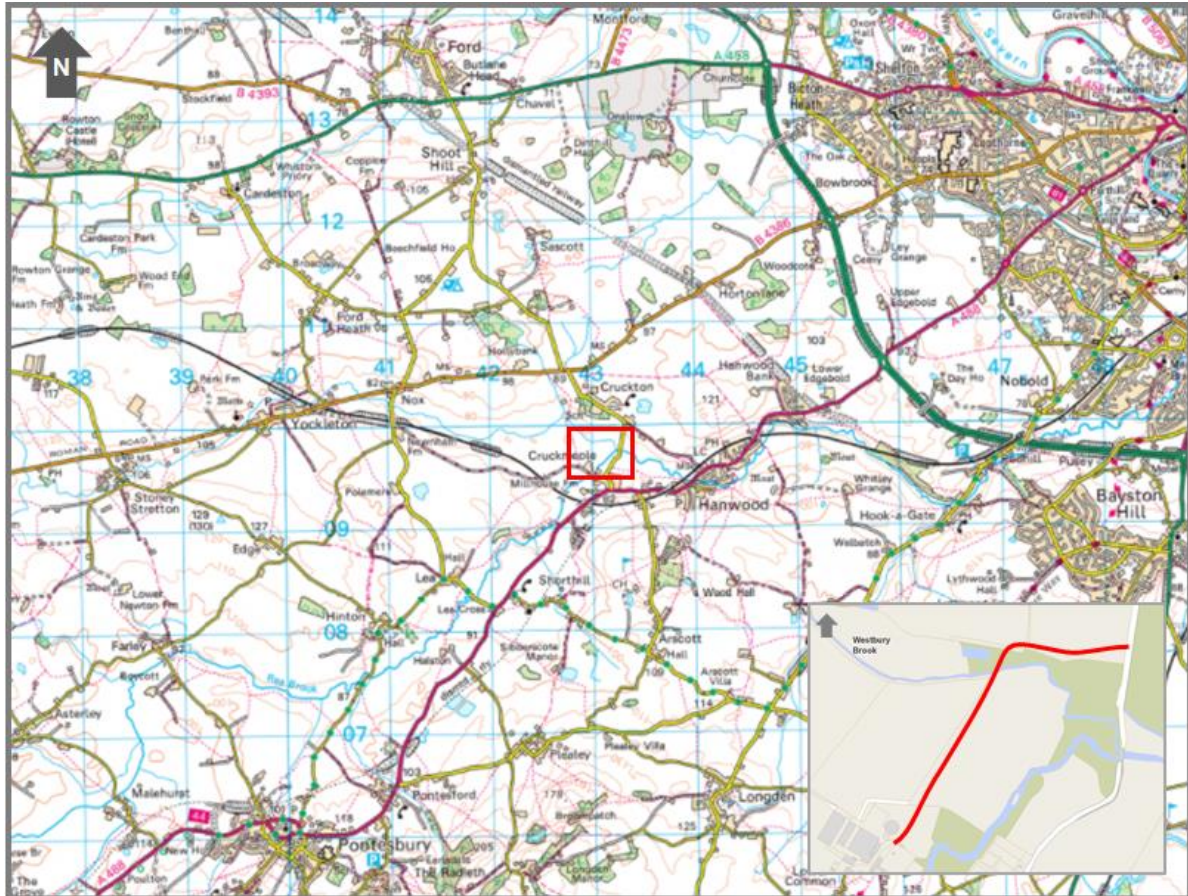


Fig 1: Site location and proposed track in red  
OS map licence no. 100048619

A desktop search and general protected species walkover of the site and surrounds aimed to establish the presence or absence of bats, Great Crested Newt, Otter, Water Vole, breeding birds and other protected species with potential to be negatively affected by the development.

The site comprises improved grassland, hedgerow, bare-ground, tall ruderal vegetation and a small section of stream.

## 1.2 Proposed works

The proposal is for the formation of a new (six metre wide) farm access track. Hedgerow removal will be required in three locations and a small stream will need to be culverted.

## **2 METHODOLOGY**

### **2.1 Desk study**

Sites of international, national and local conservation significance were sought within 100m of the site. Searches were conducted using the following sources:

- MAGIC maps
- Shropshire Environmental Network (SEN)

OS maps and aerial photographs (Google Earth) were used to identify landscape features of potential ecological interest including hedgerows, tree-lines, ponds, streams, ditches and areas of likely (semi-)natural value.

### **2.2 Habitat survey**

A survey of the site and surrounds was conducted on 13/09/23 by Mr Rob Thorne following the JNCC (1993) Phase 1 methodology.

Habitats were assessed and their importance/value noted based on botanic diversity and/or their potential to support uncommon or rare species of flora and fauna (e.g. axiophytes/Red Data Book species).

### **2.3 Protected species survey**

#### **2.3.1 Bats**

##### *Field survey*

Trees with features thought suitable to support bat roosts were identified on and adjacent to the site. Tree roost assessments were carried out from ground level using a high powered torch and binoculars.

#### **2.3.2 Great Crested Newt**

##### *Desktop search*

Ponds and other potential breeding habitats were sought within 250m of the site using OS maps and aerial photographs.

##### *Aquatic (breeding) habitat suitability assessment*

Two ponds were broadly assessed for their breeding habitat suitability.

### *Terrestrial habitat suitability assessment*

The habitats on and adjacent to the site were assessed for their suitability to provide places of rest or shelter (referred to as terrestrial habitats). The potential for newts to traverse the site and any dispersal limitations that might interrupt such movements were also considered.

#### **2.3.3 Otter**

##### *Field survey*

Signs of Otter activity were sought up to a distance of 100m from the proposed stream crossing. N.B. 50m is the recommended disturbance buffer in relation to non-natal resting sites and 100m is the recommended disturbance buffer in relation to natal (birthing and/or rearing) holts.

The survey aimed to identify any evidence of potential holts (permanent resting places), hovers or couches (temporary resting places) and any slides or paths leading to or from such features. Additional signs such as footprints, feeding remains and spraints - isolated or deposited on prominent features (seats) along the stream bank - were also noted. An extendable mirror and torch were available to inspect potential resting places (and to look through denser areas of vegetation for evidence of Otter activity).

##### *Habitat suitability assessment*

A general habitat suitability assessment was carried out to determine the likely value of this stretch of stream for foraging and commuting Otters.

#### **2.3.4 Water Vole**

##### *Field survey*

Signs of Water Vole activity were sought up to a distance of 100m from the proposed stream crossing. This included searches for field signs such as burrows (with vegetation cropping), runs, feeding stations, droppings, latrines and footprints.

#### **2.3.5 Badger**

##### *Field survey*

Burrows were sought within at least 50m of the site. Other evidence of site use, such as latrine pits, paths, snuffle holes, feeding remains and hairs (in burrow spoil or snagged along trails) was also sought.

### **2.3.6 Breeding birds**

#### *Field survey*

Birds seen or heard during the survey were recorded and old nests were attributed to species where possible.

#### *Habitat suitability assessment*

Habitats, with potential to support common, priority or Schedule 1 species of nesting bird were identified within the site and the immediate surrounds.

### **2.3.7 Other protected and priority species**

#### *Habitat suitability assessment*

Habitats thought suitable to support other protected or priority species potentially relevant to the site location were also sought. Where no suitable habitats exist and/or where no impacts can be reasonably predicted, species can be discounted from further survey, impact assessment and mitigation - in this instance Dormouse, White-clawed Crayfish (this species has not been recorded from the river catchment) and Reptiles (the tall ruderal habitats present are shaded by trees and steep stream banks).

## **3 RESULTS AND EVALUATION**

### **3.1 Designated sites**

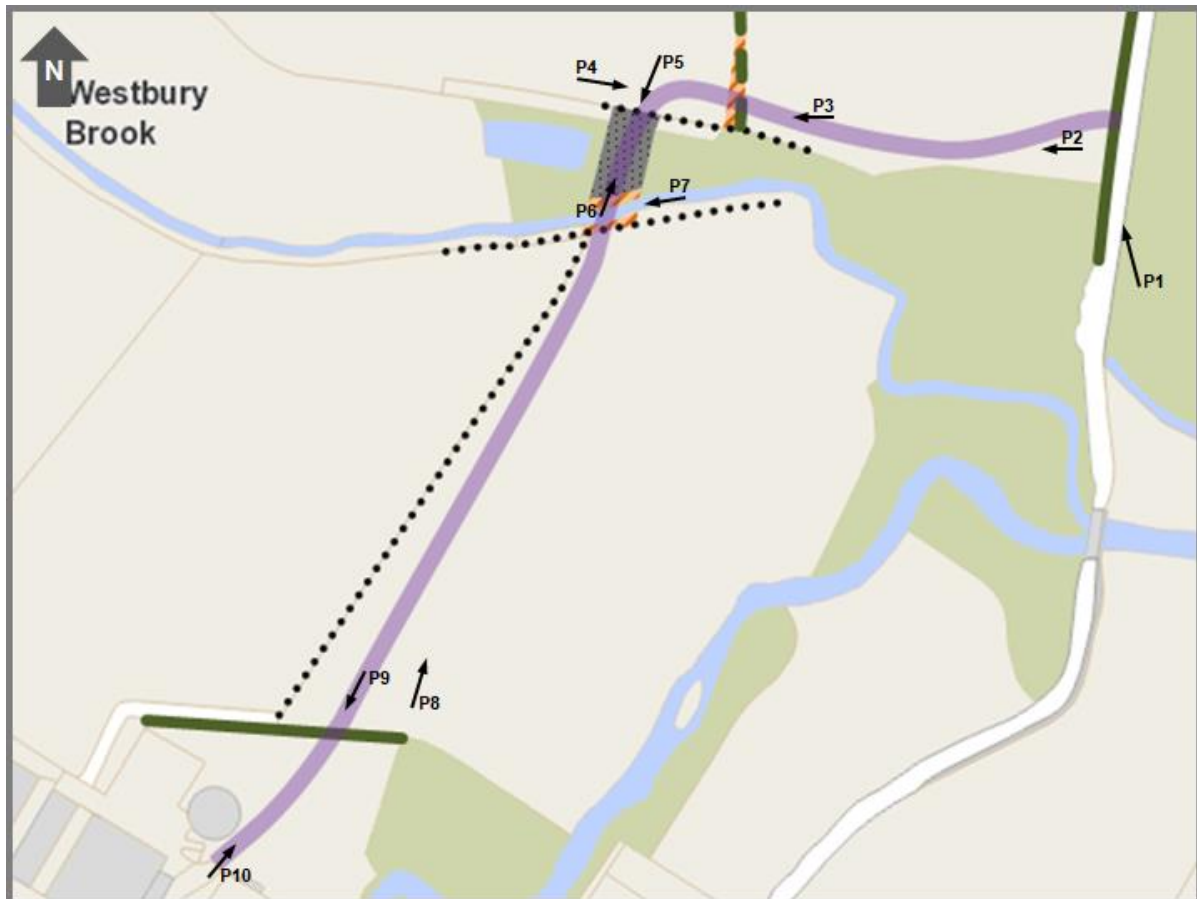
#### *Statutory and non-statutory sites*

There are no sites of international, national or local conservation significance within 100m of the site. Westbury Brook, a tributary of the Rea Brook and ultimately the River Severn, will be physically affected by the installation of the culvert.

## 3.2 Field survey

### 3.2.1 Habitat descriptions

The site comprises four improved grassland fields (Perennial/Italian Rye-grass and White Clover), an area of recently cleared bare-ground, three areas of nettle dominated tall ruderal vegetation, a short section of stream and three hedgerow sections.



**Fig 2:** Phase 1 habitat map (with photo locations). Proposed track in purple, bare-ground in stippled grey, tall ruderal vegetation in dashed light brown, hedgerows in green, stock fencing in black and stream in blue

The stream is a small, shallow tributary of the Rea Brook and the two converge approximately 200m to the south-east. The section of stream to be culverted is a mix of glide and riffle with a substrate of silt with some larger (15mm diameter) granular material towards the riffle. The channel measures approximately 1.5m in width at this location. The south bank is sheer sided and the north bank gently shelving.





**P1:** Laneside hedge: viewed from the SE, looking NNW



**P2:** NE field: viewed from the E, looking W



**P3:** Central hedge gap: viewed from the E, looking W



**P4:** Central field: viewed from the W, looking ESE to hedge



**P5:** Bare-ground: viewed from the NE, looking SSW



**P6:** Bare-ground: viewed from the SW, looking NNE





**P7:** Stream: viewed from the E, looking WSW



**P8:** Main field: viewed from the SW, looking NNE



**P9:** S hedge: viewed from the NE, looking SW



**P10:** S field: viewed from the SW end, looking NE

The laneside hedgerow to the north-east is trimmed to a height of approximately six feet and supports a total of nine woody species (Hawthorn, Blackthorn, Elder, Dog Rose, Hazel, Wych Elm, English Elm, Ash, Oak [and Sycamore]) and five woodland indicator ground-flora species (False Brome, Lord's-and-Ladies, Dog's Mercury, Herb Robert and Herb Bennet). A parallel running hedgerow is present on the opposite side of the lane and the hedgerow is linked to other hedgerows at both its north and south ends. The hedgerow also supports a dry ditch. As a consequence of these characteristics, the hedgerow qualifies as 'important' under the Hedgerow Regulations.

The central hedgerow is extremely patchy with a gap at its south end. The trackway will pass through this gap, although a single isolated Hawthorn bush will need to be removed. The hedgerow does not qualify as 'important' under the Hedgerow Regulations.

The south hedgerow is modern (planted) and dominated by Hawthorn. The hedgerow does not qualify as 'important' under the Hedgerow Regulations.

### *Evaluation and discussion*

Improved grassland and bare-ground do not represent priority habitats and are not considered to be important ecological features of the site.

Tall ruderal vegetation has some site level biodiversity value as it provides shelter, nectar and foodplants for various common invertebrates as well as foraging opportunities for various bird and mammal species; however, it is not categorised as a priority habitat and the extent of this habitat is minimal. As a consequence its loss has not been considered further.

Hedgerows and streams are (UK) priority habitats and these are important ecological features of the site. The laneside hedgerow to the north-east is 'important' as per the Hedgerow Regulations.

### **3.2.2 Flora**

#### *Field survey*

No rare plant species were recorded within the site.

### **3.2.3 Invasive non-native plant species**

#### *Field survey*

Himalayan Balsam was recorded at the proposed stream crossing on both banks.

## **3.3 Protected species survey**

### **3.3.1 Bats**

#### *Field survey*

None of the trees along the proposed trackway have the potential to support roosting bats; therefore, roosting bats are not considered to be an important ecological feature of the site.

#### *Habitat suitability assessment*

The site is unlikely to be of particular interest to anything other than small numbers of generalist foraging bat species; however, the stream corridor has the potential to be used by larger numbers of a wider range of potential bat species.

The hedgerow sections requiring removal are trimmed and do not link any notable habitats in the wider surrounds. Furthermore there are numerous alternative woody linear features nearby better suited to larger numbers of commuting and foraging bats, particularly the more sensitive (specialist) species that would (potentially) be most affected by such a proposal.

Since the lane is flanked by hedgerows on both sides any temporary removal on the one side is unlikely to have a significant adverse effect on the behaviour of commuting bat species.

#### *Evaluation and discussion*

No night working is proposed; therefore, bats commuting/foraging are not considered to be important ecological features of the site. It is therefore the opinion of Churton Ecology that no further survey effort, impact assessment or mitigation is required in relation to this species group.

### **3.3.2 Great Crested Newt**

#### *Desktop search*

The site is located in the known geographic range for this species and the species is widespread in this part of the county. Given the scale of the development, only ponds within 250m were considered to be potentially relevant to the proposal. Two mapped ponds were identified within this area and there was nothing to indicate the potential presence of any unmapped ponds (from aerial photography).



**Fig 3:** Pond location plan



**P11:** Pond P1: viewed from the E, looking W

#### *Aquatic (breeding) habitat suitability assessment*

Ponds P1 and P2 were completely dry and the vegetative community present indicates that these only hold water during the very wettest winter months. As a consequence the ponds do not represent suitable breeding habitat.





**P12:** Pond P2: viewed from the W, looking E



**P13:** Pond P2: viewed from the E, looking W

### *Evaluation and discussion*

There are no potential breeding habitats within at least 395m of the site - the next nearest mapped pond. It is therefore the opinion of Churton Ecology that no further survey, impact assessment or mitigation is required in relation to this species.

### **3.3.3 Otter**

#### *Field survey*

No spraints or other field signs were recorded along the 200m section of stream surveyed. No paths or slides were noted entering the stream at any point. No potential resting sites were recorded within 50m of the site and no potential natal dens were recorded within 100m of the site.

#### *Habitat suitability assessment*

The stream is likely to be used regularly by individual roaming Otters and this would be consistent with activity levels on similar streams of this size in Shropshire; however, it is reasonable to predict that this section of the stream does not form part of an Otter's core home range (based on the overall lack of field signs and the scarcity of suitable prey items).

### *Evaluation and discussion*

The installation of a short (wide) culvert does not represent an obstructive element to the stream corridor for this species (even during periods of spate, since the animal will just walk over the track).

No night working is proposed; therefore, commuting/foraging Otters are not considered to be an important ecological feature of the site. It is therefore the opinion of Churton Ecology that no further survey effort, impact assessment or mitigation is required in relation to this species.

### **3.3.4 Water Vole**

#### *Field survey*

No Water Vole burrows or other field signs were recorded along the 200m section of stream surveyed.

#### *Evaluation and discussion*

The survey was carried out thoroughly and all areas could be accessed and no evidence of Water Vole activity was identified. It is therefore the opinion of Churton Ecology that no further survey effort, impact assessment or mitigation is required in relation to this species.

### **3.3.5 Badger**

#### *Field survey*

No signs of Badger were noted within at least 50m of the site.

#### *Evaluation and discussion*

Badger is not considered to be an important ecological feature of this site; therefore, no further survey, impact assessment or mitigation is required in relation to it.

### **3.3.6 Birds**

#### *Field survey*

Bird species noted singing in the surrounds - and therefore potentially nesting in suitable hedgerow, tree or scrubland habitats - included Dunnock (a UK BAP), Chaffinch, Robin, Wren and Blackbird.

#### *Habitat suitability assessment*

The site is unsuitable for ground nesting bird species such as Skylark; however, the three hedgerow sections requiring removal have the potential to be used by a wide range of common and/or priority scrubland nesting bird species.

#### *Evaluation and discussion*

Nesting birds are considered to be an important ecological feature of the site but given the scale and commonality of the habitats present these are likely to be important at the site level only.

### **3.3.7 Other protected and priority species**

#### *Evaluation and discussion*

No Kingfisher nesting burrows were recorded in the steep bank at the proposed stream crossing and the area does not provide suitable Brown Trout or Brook Lamprey spawning habitat. There is limited potential for other protected or priority species to be negatively affected by the proposed development.

### **3.3.8 Schedule 9, non-native invasive plant species**

A stand of Himalayan Balsam was recorded at the proposed stream crossing.

## **4 POTENTIAL IMPACTS**

### **4.1 General**

This section considers the potential impacts (and subsequent effects) which might arise from the development in the absence of avoidance measures and/or mitigation. Wherever possible, the negative ecological impact of a development must be avoided. Any residual effects and their level of significance are further discussed with mitigation and/or enhancements in place.

It is important to note that the purpose of an ecological impact assessment is to consider impacts and effects in relation to species and habitats that have some level of international, national or local conservation significance – broadly speaking rare, uncommon or declining species and habitats. These are variously protected by domestic law and priority species have some limited protection under the provisions of the NERC Act and The Environment Act (2021) – species and habitats listed on the UK/Local biodiversity/habitat action plan and consequently S41 of the NERC Act.

### **4.2 Site habitats**

#### *Significance of effects prior to mitigation*

Hedgerow is a priority habitat and provides the most significant linking habitat in a farmed landscape. Collectively the hedgerow sections requiring removal are considered to be important at the local level and one is considered to be 'important' under The Hedgerow Regulations.

Pollution in the construction phase could be damaging to the nearby stream and any associated eco-systems located further downstream. The impact of this could be significant at the local level depending on the nature of the contamination.

#### *Significance of residual effects after mitigation*

With avoidance and mitigation measures in place – pollution prevention measures and reducing hedgerow loss to its absolute minimum and replanting it where removal is absolutely necessary - there should be no significant residual effect on the local hedgerow/stream networks.

#### *Significance of residual effects after enhancements*

Managing the hedgerows in a more sympathetic manner, infilling existing gaps and creating new hedgerows along the access track is likely to have a significant beneficial effect on the local hedgerow network and any associated flora and fauna species.

### **4.3 Protected species**

#### **4.3.1 Breeding birds**

##### *Significance of effects prior to mitigation*

The development will result in the loss of suitable nesting habitat. The impact of this is unlikely to have a significant adverse effect on local bird populations; however, works that have the potential to damage or destroy the (active) nesting site of a bird would constitute a legal offence.

##### *Significance of residual effects after mitigation*

With mitigation measures in place (timing restrictions) there will be no significant residual adverse effect on nesting birds.

##### *Significance of residual effects after enhancement*

Managing the hedgerows in a more sympathetic manner, infilling existing gaps and creating new hedgerows along the access track is likely to have a significant beneficial effect on the local bird population. Bird boxes (including open fronted designs suitable for species such as Grey Wagtail) could also be installed on suitable trees along the stream.

### **4.4 Survey constraints**

There were no significant survey constraints.



## **4.5 Protected species legislation**

### Birds

With the exception of Schedule 1 listed bird species, which receive a higher level of protection against breeding disturbance, all common species of bird are protected during their breeding activities under the Wildlife and Countryside Act 1981

Essentially, this makes it an offence to intentionally take, damage or destroy the nest of any wild bird whilst that nest is occupied or being built; intentionally take or destroy the egg of any wild bird.

## **4.6 Personnel**

Rob Thorne BA (Hons) MRSB has eighteen years' experience surveying sites for development and conservation purposes, covering Ecological Impact Assessment, botanical and vegetation surveys, and is competent to survey for a wide range of protected and priority species. He holds NE and NRW bat (17yrs) and Great Crested Newt (15yrs) survey and numerous mitigation licences and is a long-time member of The Shropshire Bat Group. He holds, or is accredited to work under, survey licences for Barn Owl, White-clawed Crayfish and Dormouse. He is also an experienced reptile and Otter surveyor having undertaken large scale reptile surveys for Natural England (to inform SSSI designations) and the Wildlife Trusts and targeted Otter surveys of watercourses for The Shropshire Mammal Group (as well as for numerous development proposals). He is also experienced in reptile mitigation, habitat management and trans/re-locations and has carried out long-term studies of several Slow-worm populations.

## **5 PROPOSED AVOIDANCE MEASURES, MITIGATION AND ENHANCEMENTS**

### **5.1 Avoidance measures and mitigation**

#### **5.1.1 Habitats**

Existing trees, shrubs and hedgerows must be retained wherever possible. Where hedgerow removal is considered mandatory to comply with highways visibility standards a new hedgerow can be (re-) planted just outside the visibility line to best replicate the hedgerow link being lost (see enhancement chapter for woody species planting list).

To prevent, or reduce, sediment run-off during the construction phase it is recommended that temporary shuttering is installed downstream of the culvert to minimise material falling into the stream when the stone is laid and compacted. To reduce sediment run-off

particularly during the early operational (settling) phase the track should be cambered/channelled towards each bank so that water is directed to the banks instead of spilling over the deck and into the watercourse. To ensure continued passage for fish and other relevant aquatic species the base of the culvert must be suitably buried below the natural bed level to allow for its natural width to be maintained.

It is the engineer/developer's responsibility to be fully conversant with GPP5 and PPG5, the pollution prevention guidelines on works or maintenance in or near water. The developer shall put in place measures to prevent pollution or to deal with any spillages during the construction phase that are compliant with GPP5 (works and maintenance in or near water/pollution incident response plans), PPG1 (understanding your environmental responsibilities), PPG6 (working at construction and demolition sites) and GPP22 (dealing with spills). The documents can be downloaded from the Environment Agency website.

No storage of chemicals or fires will occur within at least 5m of the stream bank and chemical storage areas must be suitably bunded. Check, Clean, Dry and Disinfect as a biosecurity measure against spreading non-native invasive species and diseases such as; (potentially) Himalayan Balsam, Signal Crayfish and Crayfish plague. Check all clothing and equipment for any visible debris and remove this at the location where it was found. Particular attention must be paid to the seams and seals of boots. Equipment must be hosed down or pressure-washed on site or the equipment can be bagged up for later disposal/treatment. Dirty water must be contained and restricted from entering the watercourse. Wherever possible, clean clothing and equipment must be sprayed with a disinfectant/antifungal solution (e.g. Virkon) to eradicate potential pathogens. All clothing and equipment must be allowed to dry thoroughly for at least forty-eight hours before it is used elsewhere. Some non-native species/pathogens can survive for as much as fifteen days in damp conditions and up to two days in dry conditions, so the drying process is very important.

### **5.1.2 Protected species**

#### *Breeding birds*

The nests of actively breeding birds must be avoided during the works period. If nests are encountered then works must cease or avoid that area until the young have departed the nest. Works that may affect nesting birds (hedgerow, tree and scrub removal) must be carried out as follows:

- Between 31<sup>st</sup> August and March 1<sup>st</sup> - outside the breeding season - when birds are unlikely to be nesting. **This is the most suitable means of mitigation in this instance.**

#### *Other*

It would be advisable to regularly cut the working area in the lead-up to the development. This will ensure that no protected or priority species can take up residence during the lead-in period (e.g. migrating reptiles).

If it is necessary to leave a trench open overnight then it should be provided with shallow sloping earth ramps, sloped boards or planks. Any open pipework should be capped overnight. All open trenches and pipework should be inspected at the start of each working day to ensure no animal has become trapped. If any trapped animal is encountered then works should cease until an ecologist has been consulted to establish a way forward.

### **5.1.3 Schedule 9, non-native invasive plant species**

#### *Himalayan Balsam*

It is an offence under the Wildlife and Countryside Act 1981 (as amended) to spread or to cause the spread of Himalayan Balsam into the wild; therefore, this species eradication plan will need to be implemented during the site clearance/enabling phase.

All contractors and site personnel will be made aware of the presence of Himalayan Balsam and the need to implement best practise biosecurity measures to avoid the spread of this species beyond its current (site) location. A suitably qualified individual will carry out a toolbox talk and identify the stand to all personnel working on the site.

All machinery that has been operating at the site will be power washed and cleaned of plant material and earth prior to its removal from the site. This will ensure that no invasive material is spread away from the site.

If any soil is to be transported off the site then this will have to be disposed of at a licensed landfill and taken to the landfill by a registered carrier.

Alternatively, and in accordance with good practice guidelines, the plants and their roots can be pulled by hand and stacked just outside the working corridor where they will naturally decompose in situ.

## 5.2 Enhancement recommendations

### 5.2.1 Habitats

Any hedgerow loss must be re-planted in as like-for like fashion as possible. New (native) hedgerows can be planted along the proposed trackway. This planting effort would go some way to satisfy paragraph 174 of the National Planning Policy Framework (providing net gains in biodiversity).

Native shrub species recommended for hedgerow planting	
Taxon	Common name
<i>Corylus avellana</i>	Hazel
<i>Crataegus monogyna</i>	Hawthorn
<i>Quercus robur</i>	Oak
<i>Carpinus betulus</i>	Hornbeam
<i>Taxus baccata</i>	Yew
<i>Viburnum lantana</i>	Wayfaring tree
<i>Prunus avium</i>	Wild Cherry
<i>Sorbus aucuparia</i>	Rowan
<i>Euonymus europaeus</i>	Spindle
<i>Viburnum opulus</i>	Guelder Rose
<i>Acer campestre</i>	Field Maple
<i>Cornus sanguinea</i>	Dogwood
<i>Ilex aquifolium</i>	Holly
<i>Rosa canina</i>	Dog Rose
<i>Frangula alnus</i>	Alder Buckthorn

Note: Blackthorn is best avoided as its suckering habit will soon scrub over any margins. Hawthorn should comprise 60% of the planting stock. The remaining 40% of the planting stock should comprise an even or varied mix of interplanting using the other species listed in the table above.

All planting must be carried out within the recognised planting season (November to March) and plants must be of local origin/provenance. Plants should be set out in a double staggered row using a total of 5 plants per linear metre, with rows set 225mm apart. All newly planted stock must be fully protected from rabbit damage by the use of tree/shrub guards.

In the second or third year new hedging plants should be hand trimmed to an even height of approximately 750mm to encourage side shoots and the development of a sound base to the hedge. For the following two or three years, the leaders should be allowed to grow unhindered and the sides trimmed only if necessary. After the first 5 years, mechanical

hedge trimming can commence OR the native hedge could be allowed to grow up until tall enough to be laid/pleached (approximately 10 years).

It is recommended that the new hedges are subsequently cut only every two to three years to a height of 2 to 2.5m (to allow some fruiting), with cuts carried out in the late winter months. Some Field Maple could be allowed to grow into trees since these do not attain a great height.

Cutting of hedgerow should be done on rotation e.g. only one third cut every three years. It is also recommended that any existing hedgerows could be managed in a similar way to improve their biodiversity value.

### **5.2.2 Species**

Woodcrete bat and bird nesting boxes suitable to support a wide range of species could be installed on suitable trees along the stream corridor.

The locations of these would typically be provided at the Reserved Matters (or a prior to first occupation condition).

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