

Ecological Summary Report: MVN2 48a M62 Motorway

Introduction

NLG Ecology Ltd (NLG) was commissioned by J. Murphy and Sons Ltd to undertake a Preliminary Ecological Appraisal (PEA) of an area of land immediately south west of railway bridge 48a in Rochdale, Greater Manchester. The bridge, which is subject to demolition and replacement proposals, spans the width of the M62 and carries the Manchester Victoria and Normanton (MVN) Line from north to south. The bridge itself falls outside of the redline boundary described in this report, which covers the area immediately south west of the bridge; this area will be subject to tree clearance and de-vegetation works in order to facilitate the establishment of a site compound and proposed works to the bridge. The bridge is centred at Ordnance Survey Grid Reference (OSGR) SD 88115 09741, nearest postcode OL10 2QB. The survey area is shown in Figures 1 and 2, with photographs and relevant legislation provided later in this report.

The appraisal was required to establish baseline conditions, highlight any potential ecological constraints to the proposed works, and to inform proposals in terms of ecological mitigation requirements and opportunities for biodiversity net gain through habitat enhancement post-works. Survey effort and assessment adhered to the Guidelines for Preliminary Ecological Appraisal (CIEEM, 2017), Guidelines for Ecological Impact Assessment (CIEEM, 2018) where appropriate, and best practice species guidance. Habitats were mapped and assessed according to UK Habitat Classification and baseline data were input to Natural England's Biodiversity Metric 4.0.

The survey was carried out on 8th November 2023 by Melissa Emblin-Simpson (Assistant Ecologist, QCIEEM) of NLG Ecology Ltd.

The survey informed recommendations as controls to minimise any compromise of the legal protection afforded to species and habitats under the relevant Wildlife Law. The ecological constraints identified, along with the associated recommendations, have been put in the format of Control Measures to provide a working document for managers and site operatives.

This report is a summary version of the M62 Preliminary Ecological Appraisal Report, with additional updates to the work proposals as provided by J. Murphy & Sons Ltd. For further details of the initial survey undertaken on November 8th, please refer to the PEA report.

Constraints

Whilst desk study records can help to inform and complement survey effort, they should not be treated as a comprehensive list of species present within the search area. Many species are under-recorded and a lack of records can reflect a lack of survey effort in certain areas rather than confirming absence of a species. Due to the sensitive nature of badger records and often lack of disclosure to the public, the available data are not considered to accurately represent badger presence/absence throughout the search area. Similarly, records of non-statutory Local Wildlife Sites, otherwise known as Sites of Biological Interest or Sites of Interest for Nature Conservation, are not available through open-source desk study searches; this constraint must be considered for projects that have the potential to impact upon such sites.

Castleton Wastewater Treatment Works (WwTW), adjacent to the proposed works site, was inaccessible for survey.

Floral assessment was undertaken outside of the main flowering season, meaning the botanical species recorded are not considered to fully represent the assemblage present on site.

The HSI assessment of the waterbody to the north east of the bridge was undertaken outside of the optimum period (May – September inclusive).

The report must be treated as strictly confidential due to the disclosure of approximate badger sett locations.

Ecological Summary Report: MVN2 48a M62 Motorway

Summary of Ecological Constraints	
Species/Habitat Affected	Summary
A. Designated Sites and Priority Habitats	The proposed works fall within proximity of Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC). It is recommended that a Habitat Regulations Assessment (HRA) is undertaken to ascertain that works will not have a significant impact upon this designated site. Natural England may need to be consulted with regards to the proximity of the canal in advance of any construction activities on site. Lowland deciduous woodland, a priority habitat, is subject to clearance in order to facilitate the works. This habitat is not considered to be replaceable within 30 years. Mitigation and enhancement measures will be necessary to achieve at least 10% Biodiversity Net Gain post-works; see Control 'A'.
B. Invasive Species	Himalayan balsam (<i>Impatiens glandulifera</i>) and rhododendron (<i>Rhododendron ponticum</i>) were identified within the proposed works boundary. Biosecurity measures should be followed throughout the duration of works to prevent spread of these invasive plants; see Control 'B'.
C. Water Pollution	Due to the proximity of Trub Brook and Rochdale Canal to the survey area, best practice pollution measures should be maintained throughout the works; see Control 'C'.
D. Roosting Bats	Mature trees are present throughout the site, including woodland within the works boundary; Ground Level Tree Assessments (GLTA) of any mature trees to be impacted to determine their potential value to roosting bats will be required. See Control 'D'.
E. Nesting Birds	Trees and dense vegetation throughout the site could hold potential for nesting birds. Vegetation removal should only take place outside of the main nesting season (which runs from March to August inclusive); if this timing is not possible, works must be preceded by a nesting bird check carried out by an ecologist. See Control 'E'.
F. Riparian Mammals	The watercourse known as Trub Brook, which intersects the survey area towards the south west, has limited potential for riparian mammals. As a precautionary measure, the watercourse should remain open to wildlife passage throughout the works and no overnight lighting should be used. If a riparian mammal is sighted at any point near the working area, works should cease and an ecologist contacted for advice on how to proceed; see Control 'F'.
G. Burrowing Mammals	A main badger (<i>Meles meles</i>) sett has been previously confirmed within Castleton Wastewater Treatment Works (WwTW) boundary. Where possible, any works should be undertaken further than 30 m away from this sett; should the use of heavy machinery and excavations be required within 20 m of the sett, a Natural England Badger Disturbance Licence will be required in order for the works to proceed lawfully. A badger sett, considered an annex sett, was identified within the woodland to the west of the WwTW (OSGR: SD 87883 09572), within the works boundary. This sett will require monitoring with static cameras for 28 days to ascertain utilisation by badger. Should badgers be confirmed to be using the sett, then the sett will require closure under licence July-November inclusive. See Control 'G'.
H. Small Mammals	Dense scrub, brash and debris piles throughout site are suitable for small mammals such as hedgehog (<i>Erinaceus europaeus</i>). Scrub habitats should be cut back in stages, by hand, to allow small mammals to vacate the area safely. Brash piles should be retained where possible. See Control 'H'.
I. Amphibians	Dense scrub, brash and debris piles, and the proximity of standing water could provide suitable habitat opportunities for amphibian species such as great crested newt (<i>Triturus cristatus</i>) (GCN). The isolated section of canal situated approximately 190 m north east of the bridge will require environmental DNA (eDNA) survey to confirm presence or likely absence of GCN prior to the commencement of main construction works; this should be scheduled between April 15th and June 30th to be considered valid. Should GCN be found to be present within the nearby waterbody or during de-vegetation works, a Natural England Licence will be required for works to commence lawfully; see Control 'I'.

Ecological Summary Report: MVN2 48a M62 Motorway

J. Reptiles	Dense scrub, brash and debris piles, and the adjacent railway, could provide suitable habitat opportunities for common reptile species. Precautionary working methods are provided. See Control 'J' .
--------------------	--

Survey Results

Desk Study

The site is situated immediately south west of the 48a railway bridge, which heads north over the M62 between junction 19 and 20 in Castleton, Rochdale, Greater Manchester. The immediate surroundings are rural, with woodland, grassland, and scrub surrounding the motorway; the habitat becomes urban as it extends north east towards the centre of Rochdale. Rochdale Canal is situated approximately 160 m east.

The site falls within immediate proximity of Rochdale Canal Site of Special Scientific Interest (SSSI) and Special Area of Conservation (SAC), located approximately 160 m east. This site is designated for its important habitats for submerged aquatic plants and emergent vegetation, including nationally scarce SAC species. See **Control 'A'** for advice regarding the proximity of this designated site.

Hopwood Woods, a Local Nature Reserve (LNR), is located approximately 1 km south west; this is not anticipated to be impacted.

Priority habitat (in accordance with the UK Post-2010 Biodiversity Framework, formerly UK BAP) recorded by MAGIC as being within 1 km of the site includes an area of lowland fens located approximately 180 m north east. Deciduous woodland is present in all directions, including within the works boundary to the south west of the bridge; see **Control 'A'**.

A review of OS mapping returned no evidence of ponds within 250 m of the site, although a large wet area is indicated approximately 220 m south west; a review of aerial photography suggests that this area is currently wooded. Trub Brook runs in close proximity to the site, to the south, and Rochdale Canal is present to the east. The railway provides terrestrial connectivity to an isolated section of Rochdale Canal, situated approximately 210 m north west of the survey area.

A search using MAGIC returned no records of granted European Protected Species (EPS) mitigation licences for GCN within 1 km of the site.

Within 2 km of the site, three records for granted EPS mitigation licences for bats were returned. These are listed as follows:

- A licence (ref no. EPSM2010-2397) issued from 10/01/2011 to 31/10/2013 allowing for the destruction of a resting place and breeding site for common pipistrelle (*Pipistrellus pipistrellus*) at a location approximately 1.7 km south;
- A licence (ref no. EPSM2012-5119) issued from 13/11/2012 to 30/11/2013 allowing for the destruction of a resting place for common pipistrelle bats at a location approximately 1.9 km north east; and,
- A licence (ref no. 2016-20262-EPS-MIT) issued from 01/03/2016 to 28/02/2021 allowing for the destruction of a resting place for common pipistrelle at a location approximately 2 km north east.

Greater Manchester Local Record Centre (GMLRC) was used to search for protected, notable, or invasive species records within 1 km of the survey area within the last 10 years. These records are summarised as follows:

- **Amphibians:** three GCN;
- **Birds (Schedule 1 species as listed within the Wildlife & Countryside Act 1981 and birds of conservation concern red list):** five little ringed plover (*Charadrius dubius*), one herring gull (*Larus argentatus*), nine lapwing (*Vanellus vanellus*), six linnet (*Linaria cannabina*), two skylark (*Alauda arvensis*), and three willow tit (*Poecile montanus*); and,
- **Mammals (European Protected Species and Schedule 5 species as listed within the Wildlife & Countryside Act 1981):** 12 common pipistrelle, two noctule (*Nyctalus noctula*), one soprano pipistrelle (*Pipistrellus pygmaeus*), two Eurasian badger, and seven European hedgehog.

GMLRC also returned a record of a badger sett within 30 m of the proposed working area, within the boundary of Castleton

Ecological Summary Report: MVN2 48a M62 Motorway

WwTW, and one deceased badger within 1 km of the site.

No records of notable reptiles, protected plants, or invasive species were returned during the search.

It should be noted that desk study data do not represent a comprehensive list of species present or absent within a search area and, if the habitat is suitable, a species should not be assumed to be absent based on a lack of records.

Ecological Walkover Survey Results

Habitats

The railway bridge structure subject to demolition and replacement proposals carries the MVN line from north to south, spanning the width of the M62 motorway, which runs from east to west. The bridge itself falls outside of the redline boundary described in this report, which covers the area immediately south west of the bridge; the described area will be subject to tree clearance and de-vegetation works in order to facilitate the establishment of a site compound and proposed works to the bridge.

Castleton Wastewater Treatment Works (WwTW) is situated to the south west of the bridge subject to proposals, and is bordered by lowland deciduous woodland (priority habitat in accordance with the UK Post-2010 Biodiversity Framework, formerly UK BAP) to its north and west; the area of woodland to the west is currently subject to proposed tree clearance to facilitate old bridge demolition and new bridge construction works. Tree species present within the woodland include hawthorn (*Crataegus monogyna*), sycamore (*Acer pseudoplatanus*), alder (*Alnus sp.*), elder (*Sambucus nigra*), birch (*Betula sp.*), ash (*Fraxinus excelsior*), willow (*Salix sp.*), field maple (*Acer campestre*), and oak (*Quercus sp.*); these range in age from immature to mature, with a majority of the more mature individuals being sycamore and situated adjacent to the chain-link fence line bordering the WwTW. Ground flora is dominated by fern species (*Dryopteris sp.*), common nettle (*Urtica dioica*), and bramble (*Rubus fruticosus* agg.); a full, detailed assessment of the floral assemblage and the condition of the deciduous woodland was unable to be confidently ascertained due to the unsuitable time of year for botanical survey. Himalayan balsam is present within the woodland; see **Control 'B'** for advice regarding invasive species. The woodland primarily sits atop an extensive earth bund, which runs parallel with the length of the motorway situated immediately north. Some parts of the woodland were inundated with standing water at the time of survey, which had followed a period of heavy rainfall. Piles of brash and debris are present throughout the woodland. The railway embankment, which separates the deciduous woodland from the railway immediately south west of the bridge, is dominated by scrub species including rhododendron; see **Control 'B'**.

The area currently proposed as a site compound, immediately adjacent to the WwTW to the south west of the bridge, consists of sealed tarmac, which was covered in general debris at the time of survey. Immediately west of the tarmac area, an earth bund is present which is dominated by ruderal species including common nettle and rosebay willowherb (*Chamaenerion angustifolium*); grassland with scattered trees including willow extends beyond the bund to the west. A large log and brash pile is situated immediately south west of the hard standing area.

An access track extends from the proposed compound site northwards, before splitting and extending in opposite directions to the east and west. The section of track extending to the east will not be altered under current work proposals. The track crosses over Trub Brook via a brick culvert; the brook extends and flows from east to west and separates the deciduous woodland from the proposed site compound area (see **Control 'C'** for advice regarding water pollution). It flows under a brick culvert adjacent to the WwTW, and possesses steep stone embankments within proximity of the culvert and relatively shallow earth embankments further afield. The brook has a moderate flow, with rocky substrate and dense vegetation along the embankments at the point it was surveyed. Vegetation consists of fern species including hart's-tongue fern (*Asplenium scolopendrium*), alongside bramble, common nettle, and tall grass species. Himalayan balsam is also present within proximity of the brook (**Control 'B'**).

Rochdale Canal is situated within 200 m of the site, extending from north to south; see **Control 'C'** for advice regarding water pollution. An isolated section of the canal is present to the north east of the bridge, which holds slow moving/still water with dense marginal and aquatic vegetation, and is connected terrestrially to the site by the railway.

Ecological Summary Report: MVN2 48a M62 Motorway

Fauna

Roosting Bats

Several mature trees are present throughout the survey area, in particular within the deciduous woodland to the north and west of the WwTW; see **Control 'D'**.

Nesting Birds

Trees and dense vegetation throughout the survey site hold potential opportunities for nesting birds; see **Control 'E'**.

Riparian Mammals

Trub Brook holds limited potential to European water vole (*Arvicola amphibius*) due to limited burrowing opportunities in the shallow angled embankments and foraging opportunities within densely vegetated and shaded embankments extending to the west of the WwTW; no evidence of water vole was identified at the time of survey and no records within 1 km are held. The water course could provide commuting opportunities to otter (*Lutra lutra*), but had limited foraging opportunities and so was generally considered unsuitable with no evidence of otter found. See **Control 'F'** for precautionary advice regarding riparian mammals.

Burrowing Mammals

A main badger sett has been confirmed to be present within the WwTW boundary by NLG Ecology Ltd during a previous survey carried out in 2020. An additional badger sett, considered to be an annex, was identified within the woodland to the west of the WwTW (OSGR: SD 87883 09572). A disused outlier sett is also present in proximity to Trub Brook. For advice regarding burrowing mammals, see **Control 'G'**.

Small Mammals

Dense vegetation, brash and debris piles present throughout the site have the potential to provide refuge opportunities to small mammals such as hedgehog; see **Control 'H'**.

Amphibians including GCN

Dense vegetation, brash and debris piles present throughout site provide potential refuge and foraging opportunities to amphibian species such as GCN. The isolated section of canal approximately 190 m north east of the bridge was considered to hold potential for GCN due to the slow flowing, almost stagnant nature of the water and abundance of aquatic and marginal vegetation. A Habitat Suitability Index (HSI) assessment was carried out of the isolated stretch of canal due to its potential terrestrial connectivity to the site, which determined the waterbody to hold good suitability to great crested newt – see table below:

Habitat Suitability Index Assessment Results

HSI Category	Pond
Location	1.0
Pond Area	0.88
Pond Drying	0.9
Water Quality	0.67
Shade	1.0
Fowl	0.67
Fish	0.33
Ponds	0.95
Terrestrial Habitat	0.67
Macrophytes	0.8
HSI Score	0.75
	Good

Recommendations are made in respect of amphibians in **Control 'I'**.

Reptiles

Dense vegetation, brash and debris piles present throughout site could provide suitable potential refuge to reptile species. Recommendations are made in respect of reptiles in **Control 'J'**.

Ecological Summary Report: MVN2 48a M62 Motorway

No further ecological constraints were identified in respect of protected or invasive species.

Figure 1. Location of the bridge subject to work proposals (central red shape), with 1 km radius (red circle). Screenshot taken from MAGIC maps.



Figure 2. Survey area, red line boundary highlighted in red. Image provided by J.Murphy & Sons



Ecological Summary Report: MVN2 48a M62 Motorway

Figure 3. Indicative badger sett locations (main sett within the WwTW highlighted in yellow, annex sett in red). Image provided by J.Murphy & Sons.



Ecological Summary Report: MVN2 48a M62 Motorway

Photographs

Photograph 1 – Proposed site compound.



Photograph 2 – Grassland and brash piles adjacent to the proposed site compound.



Photograph 3 – Lowland deciduous woodland immediately south west of the bridge, adjacent to the M62, currently subject to proposed tree clearance.



Photograph 4 – Lowland deciduous woodland to the north west of the proposed site compound.



Ecological Summary Report: MVN2 48a M62 Motorway

Photograph 5 – Brash piles and debris present throughout the site.



Photograph 6 - Rhododendron scrub on the embankment of the railway to the south west of the bridge.



Photograph 7 – Trub Brook, which intersects the WwTW and extends along the northern boundary of the proposed site compound area.



Photograph 8 – Isolated section of Rochdale Canal, situated north east of the survey site. This was subject to HSI due to its suitability for GCN.



Ecological Summary Report: MVN2 48a M62 Motorway

Relevant Legislation Summaries

The Wildlife and Countryside Act 1981 (as amended)

Gives general protection measures for wildlife and special measures for species included on Schedules of the Act. Schedule 1 lists birds that are afforded special protection, Schedules 4-6 protects various wild animal species from injury, killing or disturbance, and Schedule 8 confers protection to certain plant species. The statutory designation of SSSI is the main site protection measure in the UK established under the WCA.

Habitats. Habitat conservation, enhancement, minimisation of loss and improvement of ecological connectivity and biodiversity form the focus of many environmental acts, most prominently the Natural Environment and Rural Communities Act (2006), which aims to help achieve a rich and diverse natural environment and thriving rural communities through modernised and simplified arrangements for delivering Government policy.

Invasive Plant Species

Section 14(2) of the Wildlife and Countryside Act 1981 (as amended) states that 'if any person plants or otherwise causes to grow in the wild any plant which is included in Part II of Schedule 9, he shall be guilty of an offence.'

Pollution

The Pollution Prevention and Control Act (1999)/Pollution Prevention and Control Regulations 2000 (as amended) introduced measures to reduce and control emissions to air, land and water from specified industrial processes. Permission is required from the Environment Agency before starting work in, over or near a main river.

Bats receive full protection under the Wildlife and Countryside Act 1981 (as amended). They are also protected under the Conservation of Habitats and Species Regulations 2017. The legislation makes it an offence to intentionally kill, injure or take a wild bat uses for shelter or protection whether present or not, and to intentionally disturb any wild bat while it is occupying a structure or place that it uses for shelter or protection.

Nesting Birds

Under the Wildlife and Countryside Act 1981 (as amended) all wild birds, their nests and eggs are protected by law and it is an offence to:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.

Riparian Mammals

Otters are protected under the Conservation of Habitats and Species Regulations 2017 and the Wildlife and Countryside Act 1981 (as amended). This makes it an offence to: intentionally or recklessly disturb an individual while it is occupying a structure or place which it uses for shelter or protection (S9:4b) and to intentionally or recklessly obstruct access to any structure or place used for shelter or protection by an individual (S9:4c). It is also an offence to deliberately capture, injure or kill an otter or to impair their ability to survive or reproduce.

Water voles are protected under the Wildlife and Countryside Act 1981, as amended, and this legislation is applicable to England and Wales. Water voles are listed on Schedule 5 of the Act and are, therefore, subject to some of the provisions of Section 9 which, with the amendments, make it (in brief) an offence to:

- Intentionally kill, injure or take a water vole (S9:1);
- Intentionally or recklessly damage or destroy or a structure or place used for shelter or protection by a water vole (S9:4a);
- Intentionally or recklessly disturb a water vole while it is occupying such a place (S9:4b);
- Intentionally or recklessly obstruct access to any structure or place a water vole uses for shelter or protection (S9:4c).

There are additional offences in relation to possessing, controlling (S9:2), and buying and selling (S9:5) any live or dead animal of this species or anything derived from them.

Water voles are also listed as a 'Priority Species' in the UK's Biodiversity Action Plan (BAP). UK BAP Priority Species are also referred to as 'species of principal importance' for the conservation of biodiversity in England and Wales within Section 74 of

Ecological Summary Report: MVN2 48a M62 Motorway

the CRoW Act 2000, and Sections 41 (England) and 42 (Wales) of the Natural Environment and Rural Communities (NERC) Act 2006.

Badger

Badgers and their setts are protected under the Protection of Badgers Act 1992. Under the Act it is illegal to:-

- Wilfully kill, injure, or take a badger or attempt to do so;
- Cruelly ill-treat a badger;
- Interfere with a sett by doing any of the following:-
 - i) Damaging a badger sett or any part of it;
 - ii) Destroying a badger sett;
 - iii) Obstructing access to a badger sett;
 - iv) Causing a dog to enter a sett;
 - v) Disturbing a badger while it is occupying a sett.

Penalties for offences under the Act are up to six months in prison and a fine of £5,000 for each offence.

Rabbit (*Oryctolagus cuniculus*) and Fox (*Vulpes vulpes*)

The Wild Mammals Protection Act 1996 makes it an offence to crush or asphyxiate any wild mammal. This may apply during site clearance works, particularly where burrowing mammals such as rabbit or fox are present, as such animals could be crushed or asphyxiated in their burrows by heavy machinery.

Hedgehog

This species is protected in England under Schedule 6 of the Wildlife & Countryside Act 1981 and are also listed under Section 41 of the Natural Environment and Rural Communities (NERC) Act 2006. This lists English species that were formerly identified as requiring action under the UK Biodiversity Action Plans and which continue to be regarded as conservation priorities under many Local Biodiversity Action Plans (LBAP) and the current UK Post-2010 Biodiversity Framework.

Great Crested Newt

Great crested newt is a European Protected Species (EPS), receiving full protection under the 1981 Wildlife and Countryside act (as amended), the 2017 Conservation and Species Regulations and the Countryside Rights of Way Act (CRoW) 2000. This means it is illegal to:

- Intentionally or deliberately capture, injure, or kill a great crested newt;
- Deliberately disturb great crested newts, or intentionally or recklessly disturb them in a place used for shelter or protection;
- Damage or destroy a breeding site or resting place;
- Intentionally or recklessly damage, destroy, obstruct access to a place used for shelter or protection; and
- Possess, sell, or offer for sale a great crested newt.

This legislation applies to all life stages of great crested newts. The maximum fine and conviction of offences under Section 9 and Regulations 39 currently stands at £5,000. The CRoW Act 2000 amendment also allows for a custodial sentence of up to six months instead of, or in addition to, a fine.

Reptiles

All UK reptile species are protected under the Wildlife & Countryside Act 1981 (as amended), making it illegal to intentionally kill or injure a common reptile. Rare reptiles (smooth snake and sand lizard) are also protected under the Conservation of Habitats and Species Regulations 2017. This makes it an offence to deliberately injure, kill, capture, or disturb a rare reptile, or to damage or obstruct any place used by the species for shelter or protection.

Ecological Summary Report: MVN2 48a M62 Motorway

Controls / Recommendations

A. Designated Sites and Priority Habitat

Rochdale Canal SSSI and SAC lie within 200 m of the proposed working area, to the east. Due to the bridge replacement works requiring planning permission, the local planning authority should consult Natural England with regards to the proximity of this designated site. It is recommended that a Habitat Regulations Assessment is undertaken, to ascertain that works will not have a significant impact upon this designated site or that assent for planned works in proximity would be required. Good practice relating to pollution control should be maintained throughout the works.

Priority lowland deciduous woodland situated to the south east of the bridge is, under current proposals, subject to tree clearance. This habitat is not considered to be replaceable within 30 years. In the first instance, the scheme design should be altered to minimise impacts upon priority habitat where possible. Habitat loss in general should be minimised; increased biodiversity loss will result in the need for greater mitigation and enhancement measures to achieve at least 10% Biodiversity Net Gain post-works.

Due to the presence of mature trees on site and within the lowland deciduous woodland, should excavation works be anticipated, it is recommended that Murphy & Sons Ltd. consider Root Protection Areas (RPA's) to prevent any damage to roots occurring, and investigate whether or not any Tree Protection Order (TPO's) are present within the vicinity. In general, mature trees should be protected from disturbance and disruption throughout the duration of the works.

B. Invasive Species

Himalayan balsam and rhododendron, invasive plant species as listed on Schedule 9 of the Wildlife and Countryside Act (1981, as amended), were recorded at various points throughout the survey area. Efforts should be made to avoid disturbing these species during the works. If this is not possible, biosecurity measures should be followed to ensure that plant fragments are not transferred on either equipment or the boots of site operatives; this should involve tyre/wheel arch and boot cleaning using an appropriate disinfectant such as Virkon before entering the site and when leaving.

Control of Himalayan balsam entails manual pulling or strimming (below the first node) of any plants within any work areas. This management should be undertaken outside of the seeding period (July to October, inclusive), accompanied by the burying or composting (in a designated, contained area) of plant fragments; any arisings should be left in situ and not removed from site in order to minimise the spread of this species. See Appendix 2 for Himalayan balsam identification guide.

If unavoidable, smaller specimens of rhododendron can be hand pulled (gripping the base of the stem and pulling at an acute angle), or stump excavation of mature specimens carried out. For the latter method, the woody growth of the rhododendron should be manually removed with chainsaws or clearing saws, leaving stumps with no remaining live branches or shoots. This material, along with the excavated stumps can then be removed to a contained, designated area for burning or chipping (if burning, drying the material out first eases the process).

C. Water Pollution

Due to the proximity of Rochdale Canal and Trub Brook, all works will be conducted in line with the Network Rail Environmental Contract Requirements (NR/SP/ENV/015) and all industry best practice. This will avoid the risk of polluting the watercourses through chemical contamination or substrate run-off, and its associated risk to riparian mammals and other species.

- Any chemicals (if required) will be stored in designated places and banded to prevent leakages.
- Spill kits will be on site to deal with any leakage of fuel, wet concrete, or chemicals.
- Vehicles will be inspected regularly to identify leaks, fuelling will be carried out off site.
- On completion of the works, the working area will be reinstated on a like-for-like basis.

D. Roosting Bats

Mature trees are present throughout the survey area, most notably within the deciduous woodland subject to tree clearance proposals. Any mature trees anticipated to be impacted by the proposed works will require detailed Ground Level Tree Assessments (GLTA's) in order to determine their potential value to roosting bats prior to the commencement of works.

Ecological Summary Report: MVN2 48a M62 Motorway

E. Nesting Birds

It is recommended that all de-vegetation works are undertaken outside of the main nesting bird season (considered March to August inclusive). If this timing is not possible, de-vegetation works should be undertaken only where absolutely necessary, in a phased approach in line with the other ecological recommendations and only following a pre-works check by an ecologist. Checks should be carried out no more than 48 hours prior to works in each area. If any active nest(s) is identified, it will be protected by a minimum buffer of 5 m in all directions until an ecologist has confirmed that the nest(s) has been completed and any chicks have fledged.

F. Riparian Mammals

No evidence of otter or water vole was recorded during the survey. However, the section of Trub Brook extending to the west of the WwTW was considered to hold limited potential for water vole and commuting otter. Under current proposals, the watercourse should not be directly impacted upon by the works. It is therefore recommended that precautionary working measures be followed for the duration of works with regards to riparian mammals, including:

- Pollution prevention measures to prevent contamination of the watercourse;
- Where possible, night works should be avoided to allow for the normal behaviours of nocturnal species that utilise the riparian channel;
- No equipment should be stored along the brook banks overnight. Excavations should be securely covered overnight or fitted with an escape ramp;
- Blocking of the channel should be avoided. If there is a requirement to block or change the course of the channel, a safe pathway should be put in place for species such as otter that use the watercourse for commuting; and
- If any riparian mammals are sighted at any point near the works area, the works should cease and an ecologist must be contacted for advice on how to proceed – any animals must be allowed to disperse of their own accord.
- Should future works be expected to impact upon Trub Brook in any way, these measures would need to be reviewed by an ecologist.

G. Burrowing Mammals

A main badger sett has been identified during a previous survey undertaken by NLG Ecology Ltd in 2020, located within the boundary of the WwTW (see Figure 3, above). Where possible, any works should be undertaken further than 30 m away from the sett to avoid damage or disturbance to the sett. The following working methods should be adhered to for the duration of the works:

- A works exclusion zone should be established, clearly demarcating a 20 m buffer around the sett in which no heavy machinery will be used and no highly intrusive (excavation) works will take place;
- Necessary de-vegetation works within 10 m of the sett will be undertaken using hand tools, under the supervision of an ecologist;
- No de-vegetation works to be carried out directly over the sett entrances, with all mammal holes remaining intact (i.e. not levelling with excavators etc.);
- Minimal on site lighting should be used during night works to minimise potential disturbance upon badger;
- Should badgers be observed or badgers considered likely to be disturbed by the works, works will cease and the working measures reviewed. In such as case it may be assessed that a Natural England Licence would be required in order to lawfully complete the works.

An additional badger sett, considered an annex sett, was identified within the woodland to the west of the WwTW (OSGR: SD 87883 09572), within the working boundary. A works exclusion zone should be established, clearly demarcating a 20 m buffer around the sett in which no heavy machinery will be used and no highly intrusive (excavation) works will take place.

This sett will require monitoring with static cameras for 28 days to ascertain utilisation by badger; should badgers be confirmed to be using the sett, the sett will require closure under a Natural England licence July-November inclusive. The site would need to be de-vegetated within 20 m of the nearest sett entrance to facilitate closure, with any mature trees remaining in-situ. An outline sett closure methodology is below. Any closure is to conform with Network Rail Standard guidance and should be considered as a last resort.

- De-veg within 20 m of all holes classified within the sett.

Ecological Summary Report: MVN2 48a M62 Motorway

- Install min 2.4 mm gauge rock netting, with one-way gates under a Natural England Class licence. This can only occur July-November inclusive, with sett closure complete within this period. Netting will require installation first, and then the mesh cut to install the gates.
- Gates will be monitored for a minimum of 21 days with no activity; a minimum of three visits per week by an ecologist will be required during the closure period.
- Once it is confirmed that the sett is closed, remove the netting sequentially, grout the sett and remove spoil overburden.

If, during works, any additional holes suspected to be badger sett entrances are unexpectedly discovered, works must immediately cease and an ecologist be contacted for advice. Badger sett entrances are typically in the shape of a capital 'D' with the flat side down, measuring on average 25-35 cm in width and maintaining a wide tunnel within. Fresh spoil is often present outside regularly used entrances.

With regards to rabbit and fox, these species are protected under the Wild Mammals Protection Act (1996), including from asphyxiation and crushing. It is recommended that if any additional mammal holes are identified during the works then these holes should be avoided – this includes trampling, obstruction, machinery, and temporary storage of materials. If avoidance is not possible, an ecologist should be contacted so that the species to which the hole belongs can be identified. This information will then be used to provide further advice (a site visit may be required to assess the hole(s)).

H. Small Mammals

Dense vegetation, brash and debris piles on site provide suitable potential refuge opportunities to small mammals such as hedgehog. These features should be retained where possible. Where not possible, features should be removed ideally during milder and summer months (i.e. temperatures above 6°C or outside of the hibernation period for hedgehog, considered November to February) by hand, using a soft approach to ensure the welfare of any animals within. Any hedgehogs found will be relocated away from the works area, to an area of retained or undisturbed habitat with suitable cover available. If de-vegetation is undertaken during colder weather/winter months and a hibernating hedgehog is found, the animal should be covered back over and left alone until the weather becomes milder for a prolonged period of time and the dismantling can carefully recommence as above. Contractors must be made aware of the potential presence of wild animals within the working area and must exercise caution when lifting materials from the site.

Any excavations arising from the works should be covered overnight or a shallow-angled escape ramp fitted to allow any wildlife a means of escape should they fall in.

I. Amphibians

Records of GCN were returned during the desk study, and the isolated section of canal to the north east of the surveyed bridge (within 250 m) was determined to hold 'good' suitability for GCN following HSI assessment; this waterbody is connected terrestrially to the survey area via the railway. Refuge opportunities for amphibians are provided throughout the site, in the form of dense vegetation, brash piles, and the railway tracks.

Environmental DNA (eDNA) survey should be scheduled prior to the commencement of the main construction works, including any de-vegetation works, to establish the presence or absence of GCN within the stagnant section of canal to the north east of the bridge. This will need to be carried out between April 15th and June 30th to be considered valid. If GCN are found to be present within the waterbody, a Natural England licence will likely be required for works to proceed lawfully. If the species is considered likely absent following the eDNA survey, works can proceed under a Precautionary Working Method Statement compiled by an ecologist.

J. Reptiles

No reptiles were identified at the time of survey and no desk study records were returned for the search area. However, dense vegetation, brash piles, open grassland and the railway provide suitable refuge, foraging and basking opportunities for reptile species. In the first instance, these features should be left undisturbed for the duration of the works due to their suitability to reptiles. If this is not possible, the following precautionary recommendations should be followed:

- All operatives must be briefed that reptile species may be present in the area during site induction/briefing in advance of work activities commencing on site;
- Works should avoid the hibernation period for reptile species (considered November-March) – if works are to

Ecological Summary Report: MVN2 48a M62 Motorway

proceed within the hibernation period, an Ecological Clerk of Works (ECoW) should be present and mark the location of any suitable hibernaculum;

- If a reptile is spotted within the active period for the species it should be allowed to naturally disperse and works may commence without further issue;
- Should a suspected reptile be found taking shelter within any working areas then a small exclusion zone will be created with the animal left in-situ. In this instance an ecologist should be contacted for advice with further works likely commencing under ECoW for reptiles with a works ecological method statement issued.

References

Collins, J. (ed) (2023) Bat Survey for Professional Ecologists: Good Practice Guidelines (3rd Edition), Bat Conservation Trust, London.

Google Maps (<https://www.google.co.uk/maps/> - accessed 27/10/2023)

JNCC, (2010). Handbook for Phase 1 Habitat Survey - A technique for environmental audit. ISBN 0 86139 636 7

Multi-Agency Geographic Information for the Countryside <http://magic.defra.gov.uk/MagicMap.aspx> – accessed 27/10/2023)

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

Signature: **Melissa Emblin-Simpson**

Date: **30/01/2024**



Appendix 1. Great Crested Newt Identification Guide

Physical description of great crested newt

Should a newt be found, a description and photographs of great crested newt are given below to aid identification. In the UK, great crested newts may grow up to 17cm long (body and tail). They are the largest species of newt found in Britain. Great crested newts have dark grey-brown backs and flanks, and are covered with darker coloured spots so that they appear almost black in colour. They also have fine white spots on their lower flanks, which are more obvious in breeding males. Their undersides are either yellow or orange-coloured and are covered in large black blotches. Males can be distinguished from females by the presence of a jagged crest that runs along their backs, dipping at the rear of the abdomen to a smoother-edged crest above and below the tail. They also have a silver-grey stripe that runs along the tail. The male's crest is more pronounced during the breeding season, and lies flat to the body when the newt is out of water. Females lack a crest, but have a yellow-orange stripe along the lower edge of their tails.

Ecological Summary Report: MVN2 48a M62 Motorway



Male and female adult great crested newts

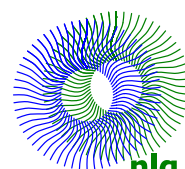


Underside of female great crested newt



Great crested newt (lower part of picture) with smooth newt (upper part of picture)

Appendix 2: Himalayan balsam Identification Guide (see below)



nlg ecology ltd

Himalayan Balsam identification sheet

This plant is listed under Schedule 9 of the Wildlife and Countryside Act 1981 (as amended). It is an offence to plant or otherwise cause spread in the wild.

 ARKive www.arkive.org © Chris O'Reilly / naturepl.com	Seedling in moss Seedlings begin to appear in March (depending on weather and climate) The first 'leaves' are nearly-round, pale green and un-toothed with a nick at the end
	Real, toothed leaves begin to come through and may have reddish mid-ribs

	Immature plant Leaves are slender with finely serrated edges. They are opposite or in whorls along the stem and may have a reddish mid-rib
	Flowers begin to show in June/July and range in colour from pink to white. Stems are round, hollow and range in colour from red (early in year) to pink (summer). Stems can be up to 10cm thick, although usually 3cm. Adult plants can grow up to 2m tall.

	Flowers are trumpet shaped with wide petals and sweetly scented. Flowers are present from June to October.
	Seed pods can form from July to October. Seed pods are droplet shaped and 'explode' when touched. Seeds themselves range from white (unripe) to brown (ripe)
	Winter 'hay' like remains It may be difficult to identify in winter although you can look for 'hay' like remains from last year's growth Old stems are hollow and light. Often areas of high infestation are left bare following annual die-off

Images used in this identification sheet were adapted from <http://dinns.sketchfiles.co.uk/en/invasive-species/on-the-dee/himalayan-balsam.aspx> [http://wildflowerfinder.org.uk/Flowers/B/Balsam\(Himalayan\)/Balsam\(Himalayan\).htm](http://wildflowerfinder.org.uk/Flowers/B/Balsam(Himalayan)/Balsam(Himalayan).htm) and nonnativespecies.org/