# Ecological Impact Assessment

Project: Visitor Centre Newport Transporter Bridge, Newport

Instructed by: Newport Norse

Reported by: Ecological Services Ltd
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Reported by

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# Contents

# 1. Introduction

The applicant is seeking permission to undertake a suite of works at the Newport Transporter Bridge, Usk Way, Newport. The works include the demolition of the current visitor centre and creation of a new larger building and repair works to the actual Transporter Bridge and associated structures. The site is centred at ST 31681 86251 with the Transporter Bridge extending over the River Usk and landing on the east and western bank. The land within the site boundary currently consists of tarmac parking and access areas, a single detached brick visitor centre, the winch house, anchorage houses, semi improved grassland, scattered trees and shrub planting. Repair and improvement work to the actual transport bridge is also included within the development proposals.

Full details of the proposed works to the bridge and supporting structures can be found in the Heritage Impact Assessment dated November 2019 by Austin Lord Smith. The Heritage Impact Assessment (HIA) provides background to the site and covers a wide range of work which would ideally be undertaken at site. However the exact range of works to be completed will depend on the budget available to the project and this has not yet been finalised.

The proposed development will take place adjacent to and above the River Usk Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI). In order to undertake a full appraisal of the proposed development and the potential impacts and significance of impacts upon the habitats and species within the development site and adjacent habitats, an Ecological Impact Assessment (EcIA) has been undertaken. An EcIA helps provide a clear and methodical way to identify, quantify and evaluate the potential significant effects of a proposed plan or project.

## 1.1 *Site Description*

The proposed development site comprises of two separate areas of land, a tarmac car park to the west of Usk Way and the current visitor centre and Transporter Bridge across both banks of the River Usk. The site is set within an urban context within the city of Newport. The Transporter Bridge historically allowed workers to cross the River Usk from the residential areas to the west of the river to employment and the industrial areas to the east. A permanent bridge would have impeded the flow or ships up and down the River Usk.

A tarmac access road leads to and from both sides of the Transporter Bridge. The area surrounding the land within the site boundary on the western bank is a mix of residential dwellings and light industrial units. The area surrounding the Transporter Bridge on the eastern bank is predominately light industrial units. A large playing field lies to the south

east of the bridge.The site sits to the south of the main expanse of Newport. Newport Docks are located approximately 400m to the south west.

A Preliminary Ecological Assessment (PEA) was completed by Ecological Services Ltd on the 6th August 2019 and walk over survey of the bridge itself was completed on the 2nd October 2019. As the scope of works proposed to the site had changed since the original instruction for the project additional visits to the anchorage houses, winch house and eastern deck were undertaken in January 2020. Two bat activity surveys were completed focusing on the current visitor centre which is proposed for demolition. Full details of the survey work and findings of the PEA and bat activity surveys can be found in the PEA report dated 17th January 2020 by Ecological Services Ltd.  A habitat map of the site based upon the PEA is provided in Appendix 1.

### 1.2 Surveyor Experience

Aislinn Harris is a full member of Chartered Institute of Ecology and Environmental Management (CIEEM). Aislinn is an ecologist with 10 years experience undertaking a wide range of flora and fauna surveys. All survey work is undertaken following JNCC Phase 1 Survey Guidelines and CIEEM Guidelines for Preliminary Ecological Appraisal (2nd Ed 2017).  Aislinn is a licenced bat ecologist (S085699-1) with a wide variety of experience undertaking bat activity surveys..

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## 2. Legislation

The **Habitats Directive (Directive 92/43/EEC)** aims to '*contribute towards ensuring biodiversity through the conservation of natural habitats and of wild fauna and flora in the European territory of the Member States*'. The Directive requires the establishment and conservation of a network of sites within each member state which protect the rarest flora and fauna found across Europe. A number of species and habitats are listed in Annex 2 of the directive for which areas can be designated as a SAC. The aims of the Habitats Directive are transposed into British Law through the **Conservation of Habitats and Species Regulations 2017**.

The **Wildlife and Countryside Act (1981)** as amended provide the legislation framework and protection for SSSI. A SSSI is designated by a statutory nature conservation body such as Natural Resources Wales (NRW) for its make up of flora, fauna, geological and / or physiographical features. Each SSSI should have a citation which describes the site and its special features.

**The Environment (Wales) Act 2016** is a wide reaching piece of legislation which seeks help improve the management of Wales' natural resources into the future. The Act sets out a Wales wide approach to planning and managing its natural resources at a national and local level in a sustainable manner. One main requirement for all public bodies, such as local councils, is to maintain and enhance biodiversity where possible within their duties.

### *Habitats*

#### Statutory Designations

The proposed development site lies directly adjacent to and corses over the River Usk SAC and River Usk (Lower Usk) SSSI. The River is designated as an SAC based primarily on the presence of a number of migratory and non migratory fish species and otter. The presence of watercourses of plain to montane levels with *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation is also a qualifying feature for this sites designation. The SSSI is designated based on the aquatic habitats and condition of the river and its plant and animal communities that use the feature across its range.

#### Non Statutory Designations

The Marshalls SINC (LIS6) is designated for its mosaic of neutral grassland, post industrial land and wetland habitat along the banks of the River.

### *Species*

Otter

The common otter (*Lutra lutra)* is a European protected species and is protected under the Conservation of Habitats and Species Regulations 2017. In summary, they are protected from:

- Deliberate capture, killing and injuring,
- Deliberate disturbance of a breeding site or resting place,
- Damage or destruction of a breeding site or resting place.

Otter are listed on schedule 5 of The Wildlife & Countryside Act 1981 which protects them from intentional or reckless disturbance or obstruction when using a structure or place for shelter and / or protection. It is also an offence to sell, offer or expose for sale an otter. Otter is listed in section 7 of the Environment (Wales) Act 2016 which makes them a key species to sustain and improve biodiversity.

Nesting Birds

All breeding birds are protected under schedule 1 of the Wildlife and Countryside Act (1981) as amended. Under this Act it is an offence to:

- 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

Enhanced protection is afforded to species listed on Schedule 1 of the Act, this additional protection makes it an offence to:

- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

Migratory Fish

A number of fish species within the UK are fully protected under Schedule 5 of the Wildlife and Countryside Act 1981 (as amended). This legislation protects them for a distance of up to 12 nautical miles from the Welsh coast. These are as follows:

- Burbot, *Lota lota*
- Couch's goby, *Gobius couchii*
- Giant goby, *Gobius cobitis*
- Spiny seahorse, *Hippocampus guttulatus*

- Short-snouted seahorse, *Hippocampus hippocampus*
- Basking shark, *Cetorhinus maximus*
- Vendace, *Coregonus albula*
- Whitefish, *Coregonus lavaretus*

The following species have partial protection under Schedule 5:

- Allis shad, *Alosa alosa*
- Twaite shad, *Alosa fallax*
- Angel shark, *Squatina squatina*
- Sturgeon, *Acipenser sturio*

Offences given in Section 9 of the Wildlife and Countryside Act include combinations of the following:

- intentionally kill, injure or take,
- damage or destroy any place of shelter or protection,
- disturb whilst occupying a place of shelter or protection,
- obstruct access to a place or shelter or protection,
- sell, offer or expose for sale

Certain fish species known to use the River Usk contribute to the selection of the river as an SAC site. The below fish species are listed on annex 2 of the Habitats Directive and core areas of their habitat must be protected and managed in accordance with their ecological requirements. The fish species listed as a primary reason for the selection of the River Usk as a SAC are:

- Sea Lamprey
- Brook Lamprey
- River Lamprey
- Twaite Shad
- Atlantic Salmon
- Bullhead

Allis shad are also a annex 2 species present within the river as a qualifying feature.

## 3. Impact Assessment

The PEA report details all the habitat types and species within the proposed development site and zone of influence around the site which may be impacted by the development proposals. However, the role of a EcIA is to address significant effects which the project may have. For the purpose of this assessment significant impacts will be those that affect legally protected sites and species within and directly adjacent to the proposed development site.

The EcIA process presents a hierarchy of approaches to ensure a project of plan lowers its potential impacts. The works should seek to

- **AVOID** - Consider options to avoid any potential harm to an ecological feature,
- **MITIGATE** - If negative effects are unavoidable, measures should be implemented to minimise and reduce potential effects,
- **COMPENSATE** - If negative effects are still likely to be experienced despite measures to reduce impacts being implemented appropriate compensatory measures should implemented.
- **ENHANCEMENT** - Works should always seek to provide net benefits for biodiversity to help meet the section 7 requirements of the Environment Act (Wales) 2016.

The scope of the proposed development works has been reviewed and streamlined to ensure only works necessary for the bridge and new visitor centre are being undertaken. As the Transporter Bridge is a current listed building already in situ it is not possible to avoid the the works and sensitive location I.e adjacent to the River Usk. The visitor centre has ben located as far back from the river as practically possible to reduce a variety of risks to the river and species that may use it. However the purpose of the visitor centre is to increase the experience of visitors to the Transporter Bridge which cannot be moved. Again the impacts of the work adjacent to the River Usk cannot be avoided.

When considering the works to the bridge consideration must be given the difficult working conditions contractors are likely to face. The height of the bridge means that weather conditions are more extreme the higher up the structure. It is not possible to remove all pieces of the bridge which require work and as such some works will need to be undertaken in situ, above our adjacent to the River Usk.

The development proposals have the potential to negatively impact on:

- The River Usk SAC
- River Usk (Lower Usk) SSSI

- Otters
- Bats
- Nesting Birds
- Migratory Fish Species

## 3.1) Ecological Feature - River Usk

The River Usk flows directly adjacent to the proposed location for the new Visitor Centre. The centre is proposed to be created on the western bank of the river and will be a 2 storey structure created to improve visitor experience of the Transporter Bridge. Whilst the river is outside of the development boundary works will be undertaken directly adjacent and above. The aquatic river habitat itself is sensitive to pollution which may lower water quality affecting a wide range of species and habitat that use it.

Potential Impacts

- Pollution incident during construction of visitor centre
- Material falling into river during bridge works
- Paint spills into river during bridge works
- Long term discharge from new visitor centre into the river
- Surface water discharge into the river
- Increase in litter from higher numbers of visitors

Measures to be Implemented

- A toolbox talk will be provided to all site contractors for the visitor centre and bridge which explains the protection afforded to the River Usk and potential negative impacts the work could have. Workers will be asked to remain vigilant for potential impacts their work could have and ways in which to avoid or reduce impacts.
- A Construction Environmental Management Plan will be completed and agreed with all site contractors. The management plan will set out a strict set of measures to ensure pollution does not enter the river during construction works. Measures to be addressed will include, but not be limited to, safe storage of materials and machinery away from the river and ensuring soil particles from excavation don't blow into the river. Pollution avoidance measures will also be required for the creation of the new surface water discharge point into the river.

- Any works to the bridge which have the potential for parts to fall into the river such as metal removal and replacement, will have a deck created underneath the works area to catch any parts which may fall.
- The works to remove paint from the bridge and repaint the bridge which must be carried out in situ will be completed in a secure capsule or tent. This will reduce and remove the potential for any particles to enter the river and negatively affect the water quality. Engineers undertaking the repair works will design a full logistics plan for the project which will include:
    - Weight limits on the shot from any blasted material
    - All shot grit (paint particles) will be hoovered up into 1 tonne bags
    - A wind load limit for the secure capsule. Once the wind limit is reached work must ceases and the curtains of the tent will be opened. It is anticipated the wind speed limit will be 15m/s.
- All foul water will be discharged into the local sewerage network. It is proposed to discharge surface water from the new visitor centre into the River Usk. This will require the creation of a new outfall into the river from the development site. Surface water will be subject to SUDs treatment prior to discharge as detailed within chapter 12 of the Flood Consequence Assessment by Cambria Consulting Ltd revision 3 dated 13th January 2020.
- The provision of bins around the visitor centre will be included within the site design. The land owner will be required to ensure the bins are collected frequently to ensure littler does not escape into the surrounding landscape and river.

## 3.2) Ecological Feature - Otters

Otters are known to move along the River Usk and are a primary species for the designation of the river as an SAC. The PEA report details that it is unlikely that an otter holt or resting site are currently present within or adjacent to the proposed development site. Instead the presence of otter moving up and down the river is assumed, otter footprints were found underneath the eastern deck. The scope of the proposed development works will not directly impact on the river through construction.

Potential Impacts

- Temporary noise and lighting from construction and bridge repair works restricting movement along river,
- Otter to become trapped in excavations or machinery used to create new visitor centre,

- External lighting from the bridge illuminating the river and restricting movement along it,
- External lighting from the visitor centre illuminating the river and restricting movement along it.
- Creation of a new surface water discharge outfall into the river

Measures to be Implemented

- Restriction to working hours to avoid night time working which may affect the use of the river by nocturnal animals such as otter. No night time working between the hours of 6pm and 6am.
- Any lighting of construction compounds erected as part of the development works will only be lit during night time for safety reasons. Any lighting will be directional and cowled to ensure no light spill onto the river.
- All site machinery and materials will be kept securely in a fenced site compound. The fencing will be designed and used to prevent otter gaining access into the machinery or stored materials.
- Any excavations that have a depth in excess of 1m and that are left open over night will have a means of escape left for any mammals that may fall into them. A wooden board or equivalent will be left from the bottom to the top of the hole. This will allow and mammal to escape and avoid increased stress from being trapped.
- The current lighting used on the Transporter Bridge will be removed and replaced. The HIA, sections 5.5.2 to 5.5.9, provides details of suitable lighting that could be used within the project. The exact design of the new lighting is not currently known as it depends on stock availability during construction but it will more efficient and directional. Lighting levels falling on the river below the bridge will be reduced.
- Any external lighting placed along the river bank or eastern elevation of the new visitor centre will be on a movement sensor and timed to switch off after movement has ceased. This will help to reduce light spill along the western river bank.
- The current lighting levels along the western bank of the river, where the new visitor centre will be built are shown in figure 9 of the Illumination Impact Profile by Hoare Lea dated 27th September 2019. It is proposed that the current light levels along the bank will not be exceeded. The lux levels will be limited along the eastern bank when the detailed lighting strategy is designed in the future. Monitoring of the lux levels will be included within the lighting strategy to ensure 9 lux is not exceeded at any point along the west bank. This will be achieved through a light reducing film on the windows on t eastern elevation of the new visitor centre and through the use of directional and recessed lighting.

- It should also be noted that apart from occasional events in the evenings, the opening hours of the visitor centre will be restricted to daytime hours.
- If the the new surface water discharge outfall pipe is wider than 30cm it will be grilled to prevent mammal movement up it.
- No gaps or cracks will be created around the new surface water discharge outfall pipe which an otter could use or become trapped within. The pipe outfall will be subject to a visual inspection by an ecologist to ensure it is unsuitable for mammal use.

## 3.**3**) Ecological Feature - Bats

No evidence of the presence of roosting bats has been found within the current visitor centre located within the proposed site boundary. It is also thought highly unlikely that roosting bats make use of the Transporter Bridge itself either however the site inspection of the bridge was constrained as set out in the PEA report. Bats are highly mobile species ad even the constraints of the site inspection, a precautionary approach to roosting use of the bridge is proposed.

A full internal and external assessment of the east and west bank anchorage houses and the motor house were also completed. No evidence of the presence of bats was found within the winch house. The majority of the building is assessed as having negligible potential for use by bats apart from the roof. The repair works to the structure will not directly affect the roof, however disturbance could be an issue. No evidence for the presence of roosting bats was found within either anchorage house. However bats are transitory and conditions within the buildings can change. Therefore works to all three will be undertaken following an agreed method statement.

Whilst the presence of roosting bats within the site is thought unlikely, commuting and foraging bats along the River Usk is thought extremely likely. The presence of a wide variety of bats moving along the river corridor at night must be assumed.

<u>Potential Impacts</u>

- Disturbance of occasional roosting bats within the bridge.
- Disturbance of occasional roosting bats within the roof of the motor house,
- Disturbance of occasional roosting bats within the anchorage houses,
- Disturbance of commuting and foraging bats
- Temporary noise and lighting from bridge repair works restricting movement along river.

Measures to be Implemented

- All site contractors will be given a toolbox talk which covers the legal protection given to bats, what they look like, where they may be found and what to do if bats are found at any point during the works on site which affect any structure. Should bats be found, a suitably experienced ecologist will be contacted for advice which may include that work to that area stop and a licence is sought from NRW.

- Restriction to working hours to avoid night time working which may affect the use of the river by nocturnal animals such as otter. No night time working between the houses of 6pm and 6am.

- A method statement will be written and agreed in writing with the local authority ecologist for works to the motor house. Whilst no suitable roosting locations were found were works are proposed, disturbance to the roof of the building via noise / vibrations could be an issue. Works will be restricted to the winter when bats are least likely to be present. The method statement will be written and agreed once works on the project have commenced and a better idea of budget is known.

- A method statement will be written and agreed in writing with the local authority ecologist for works to the east and west anchorage houses. Whilst no suitable roosting locations were found were works are proposed, the possible presence of occasional bats cannot be completely ruled out. Works will be restricted to the summer when bats are least likely to be present and an internal inspection by a licenced ecologist immediately prior to any works starting will be required. All works to the structure will be on a like for like basis and the buildings will not be changed.The method statement will be written and agreed once works on the project have commenced and a better idea of budget is known.

### **3.4**) Ecological Feature - Nesting Birds

Nesting birds have the potential to use the scattered trees and scrub within the boundary of the new visitor centre. Nesting birds could also be present occasionally within or on the Transporter Bridge itself. All wild birds are protected while nesting with some exceptions for certain pest species.

Potential Impacts

- Disturbance of the nesting birds.

- Loss of bird nesting habitat.

Measures to be Implemented

- Any tree or scrub removal within the site boundary will be completed outside of the bird nesting season of March to August inclusive. If this is not achievable an ecologist must inspect any trees or ground vegetation with the potential for birds to be present, for active birds' nests prior to removal works beginning. If an active nest or activity indicating a nest might be present is identified a buffer zone of 5m around the nest must be observed until the chicks have fledged. Only then can the vegetation be removed.
- There is some potential for part of the Transporter Bridge to be used by nesting birds. The site foreman and staff will provided with a toolbox talk covering the signs of nesting birds. If a nest or potential evidence of nesting is created / found during the works period, an ecologist will be contacted for advice. Advice is likely to include that the active nest is cordoned off with an exclusion zone of at least 5m around it until the chicks have fledged.
- A fortnightly check of the development site will be undertaken by a suitably experienced ecologist to check for any evidence of bird nesting. If bird nesting behaviour is identified no works within at least 5m of the nest will be allowed until the chicks have fledged. If any evidence of schedule 1 protected birds is found during the works, work in the area will cease to avoid disturbance of the bird.
- Suitable integrated bird boxes must be installed within the new visitor centre as compensation for the loss of current potential nesting sites. The design and location of the bird boxes must be agreed with a suitable experienced ecologist.
- Like for like repairs of the bridge and supporting structures are proposed. Any potential roost or nest sites within the structure will remain once the works have been completed. The work to the bridge and supporting structures will not result in the long term loss of nesting or resting location for birds.

### 3.5) Ecological Feature - Fish

A number of fish are know to use the River Usk and are a primary and secondary species for the designation of the river as an SAC. The ecology of each individual species is a specialised area, therefore broad consideration of the potential impacts to fish are made within this report.

Potential Impacts

- Vibrations from repair works to bridge.
- Pollution incident during construction of visitor centre.
- Material falling into river during bridge works.

- Paint spills into river during bridge works.
- Long term discharge from new visitor centre into the river
- Creation of a new surface water discharge point into the river

Measures to be Implemented

- Vibrations from the bridge works are thought to be of minimal impact. No works will take place within the river channel and the works will be completed well above water level along the boom section for he bridge. Any vibrations will naturally dissipate as they travel through the bridge. No vibrations should be felt within the river.
- Vibrations from the construction of the new visitor centre are thought likely given the proximity to the river. Any repair works to the eastern deck and masonry walls around the bridge could also cause disturbance to migratory fish. Any construction works adjacent to the river likely to resulting vibration will not be allowed between the 1st March and 30th June.
- The creation of the new surface water discharge point into the river will not be permitted between 1st March and 30th June to avoid potential negative impacts migratory fish.
- A Construction Environmental Management Plan will be completed and agreed with all site contractors. The management plan will set out a strict set of measures to ensure pollution does not enter the river during construction works. Measures to be addressed will include, but not be limited to safe storage of materials and machinery away from the river and ensuring soil particles from excavation don’t blow into the river.
- Any works to the bridge which have the potential for parts to fall into the river such as metal removal and replacement, will have a deck created underneath the works area to catch any parts which may fall.
- The works to remove paint from the bridge and repaint the bridge which must be carried out in situ ill completed in a secure capsule or tent. This will reduce nd remove the potential for any particles to enter the river and negatively affect the water quality.
- All foul water will be discharged into the local sewerage network. It is proposed to discharge surface water from the new visitor centre into the River Usk. This will require the creation of a new outfall into the river from the development site. Surface water will be subject to SUDs treatment prior to discharge as detailed within chapter 12 of the Flood Consequence Assessment by Cambria Consulting Ltd revision 3 dated 13th January 2020.

## 4. Management Responsibilities

The proposed development site owner and main contractor will have the responsibility to ensure the measures within this document are fully and continually implemented during the life time of the project. All site sub contractors must be fully inducted and made aware of the ecological constraints and required working methods.

## Bibliography


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- Eurpoean Communities (2000) MANAGING NATURA 2000 SITES The provisions of Article 6 of the ‘Habitats’ Directive 92/43/EEC

- Ecological Services Ltd (2019) Preliminary Ecological Assessment Visitor Centre Newport Transporter Bridge, Newport

# Appendix 1 - Phase 1 Habitat Map

VISITOR CENTRE, NEWPORT TRANSPORTER BRIDGE, NEWPORT

Habitat Map

October 2019