

MIDDLE QUAY WAREHOUSES – ABP NEWPORT PRELIMINARY ROOST ASSESSMENT (PRA) AND ACTIVITY SURVEYS FOR BATS

ExCAL



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MIDDLE QUAY – ABP NEWPORT

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1.0 EXECUTIVE SUMMARY

This report is a brief summary of findings and recommendations of the Preliminary Roost Assessment (PRA) and activity survey for bats undertaken on behalf of Associated British Ports (hereafter referred to as the client / ABP) at warehouses located at Middle Quay, Alexandra Docks, Newport, NP20 2UW. The report should be read in its entirety for full details of the survey.

- The survey comprised of an internal and external inspection of the buildings to assess their potential to support roosting bats, and identify whether any evidence of bats within the survey buildings was present;
- The proposed development consists of the demolition of the existing buildings to enable a new development at the site;
- These proposals will result in the potential disturbance and/or destruction of bat roosts if these are present within the survey buildings. Furthermore, noise and vibration from the works may cause disturbance if bats are roosting within different parts of the building or within wider areas of the site;
- Local Record Searches were undertaken using Department for Environment, Food & Rural Affairs 'MAGIC' geographic mapping software and the Welsh Government and Natural Resources Wales 'DataMapWales' in order to determine the importance of the site from a biodiversity perspective in the context of its surroundings, and to determine the site's proximity to statutory designated sites (if present) within a 1km radius of the survey area;
- The data search returned 2 records of statutory sites within 1km of the survey site. Both records relate to the River Usk, which is located approximately 150m to the north-east of the site, and which is classified as both a Special Area of Conservation (SAC) and Site of Special Scientific Interest (SSSI);
- A total of 2 records of non-statutory designated sites (in the form of a Special Landscape Area (SLA) and Site of Importance for Nature Conservation (SINC)) were also returned during the search, with these being located approximately 150m and 750m to the north-east. There are 0 ancient woodlands within 1km of the site;
- Connectivity between the site and better foraging habitat further afield is poor, although the nearby River Usk does offer some commuting and foraging opportunity for bats. The habitat surrounding the survey buildings consists largely of hardstanding, owing to the site's previous industrial use;
- The PRA was undertaken on Tuesday 1st July 2025;
- The survey consisted of the inspection of a number of buildings (designated as Shed 3, Shed 4 and Stores building) which have been affixed to one another, to make up a large single complex of industrial buildings located at Middle Quay;
- The survey buildings are generally rectangular in shape, with Shed 3 and the Stores building consisting of steel frame industrial sheds, clad with a combination of corrugated steel and asbestos cladding, whilst Shed 4 has been constructed from engineering bricks. Similarly, the roof of all 3 buildings consists of a combination of corrugated steel and asbestos sheet roof sheets, with clear plastic sheeting being used to create skylights within the respective roofs of each building;
- Numerous potential access/egress points to the building interiors were recorded during the survey. These include; damaged UPVC sheets and glass panes making up the skylights / windows of Shed 4, missing / damaged bricks within the walls of Shed 4, and open roller-shutter doors and damaged pedestrian accesses around Sheds 3 & 4, all of which enable the potential free access/egress of bats to the respective building interiors in these locations;
- Interior Potential Roosting Features (PRFs) suitable for bats are however limited. The building interiors possess no lofts, and the underside of the roof and associated steel latticed framework is visible from the building interior in most locations. Subsequently, there are limited PRFs in which crevice-dwelling bats are able to roost, although the building does provide some potential for void-dwelling / free-hanging bats, particularly where interior cladding is present, creating a void between exterior roof / wall cladding and the cladding located within the buildings. It should be noted however that the survey buildings are not thought to

provide sufficient space, shelter, protection or possess the suitable conditions to be used on a regular basis by larger numbers of bats;

- Evidence of bats was identified in the form of droppings (10 – 20) identified on the floors of Shed 3 & Shed 4;
- As such, due to the presence of PRFs within the building interior, in conjunction with numerous potential access/egress points for bats being recorded around the building and direct evidence of bats being identified within the building during the PRA, the building was assessed to have **low (confirmed roost)** potential to support roosting bats;
- Based upon the results of the PRA, it was recommended that a minimum of 1 roost characterisation survey in the form of a dusk emergence survey should be undertaken in order to assess how bats utilise the survey buildings, and determine species type and numbers if roosts are indeed present;
- An initial dusk emergence survey was subsequently undertaken on Tuesday 29th July 2025;
- In total, **up to 3 bats were identified to emerge from the survey buildings, with these consisting of 2 common pipistrelle and 1 soprano pipistrelle (*Pipistrellus pygmaeus*)** which were observed to emerge from broken windows within Shed 4;
- Following the results of the initial dusk emergence survey, the recommendation was made that a second dusk emergence survey of the building should be undertaken, to gain further information recording the roosting bats within the building, and determine whether any additional species are also utilising the survey buildings for roosting purposes;
- A second dusk emergence survey was subsequently undertaken on Tuesday 17th September 2025;
- **A total of 3 bats were again identified to emerge from the survey buildings, with these consisting of 2 common pipistrelle and 1 soprano pipistrelle** which were observed to emerge from broken windows and a skylight within Shed 4;
- Based upon the results of the preliminary roost assessment and subsequent activity surveys, the survey building is a **confirmed summer day roost for soprano and common pipistrelle**;
- No further survey effort is recommended as the findings allow an accurate assessment of the status of bats and the characterisation of roost types within the survey building to be made;
- **A European Protected Species Licence (EPSL) will be required from NRW to proceed with the works.** This will be accompanied by a dedicated **bat mitigation and compensation strategy**, which will be appropriate to the scale and scope of the proposed development works;
- Full mitigation recommendations are made in Section 7.0 of this report.

2.0 INTRODUCTION

2.1 Brief

ExCAL Limited was commissioned by Associated British Ports (hereafter referred to as the client / ABP) to undertake a Preliminary Roost Assessment (PRA) for bats within outbuildings at Bailey's Dry Dock, Alexandra Docks, Newport, NP20 2UW.

The survey buildings are scheduled for demolition, to facilitate a future new development at the site.

2.2 Objectives

The purpose of the survey was to assess the buildings' potential to support roosting bats, and to identify any Potential Roosting Features (PRF's) on or within the buildings which may be utilised by bats.

Furthermore, the buildings were also subjected to a thorough internal and external inspection to determine whether they have historically been / continue to be actively used by bats.

2.3 Site Context

The survey buildings are situated within the grounds of ABP Newport Docks, and are located at the Middle Quay complex.

The OS grid reference for the approximate centre of the survey area is ST 32070 85235.

The buildings are located within Newport docks; therefore the surrounding area consists primarily of industrial buildings, offices and temporary cabins.

Alexandra Dock and North Dock are located immediately to the west and north-west of the survey buildings respectively, whilst the immediate surroundings of the survey buildings consists primarily of hardstanding, whereby the site used to be utilised for materials storage and sorting. A small area of mixed grass and scrubland is located approximately 50m to the north of the buildings, whilst an additional small area of woodland is also located approximately 100m to the north-east.

The site is bound by East Way Road, which runs along the northern boundary of the site, beyond which a railway line servicing the port, and River Usk can be found, 100m and 150m to the north-east respectively.

The wider landscape of the area consists of a combination of pastoral fields and associated hedgerows, with Newport Wetlands being located approximately 1.3km to the south-east of the site, whilst significant industrial sites including a landfill and Cogent Power are located approximately 1.1km west and 1.2km north-east of the survey area respectively. Newport city centre is located approximately 3km to the north of the site.

2.4 Proposed Development

The proposed development consists of the demolition of the existing buildings in order to enable a new development to occur at the site. These works will result in the potential disturbance and destruction of bat roosts if these are present within any areas of the buildings.

Furthermore, noise and vibration from the works may cause disturbance if bats are roosting within different parts of the building or within wider areas of the site.

2.5 Legislation

All UK bat species and their roosts are protected under Schedule 5 of the Wildlife & Countryside Act 1981 (as amended). All bats are also included in Schedule 2 of the Conservation of Habitats and Species Regulations 2017 (as amended) (Habitats Regulations), which defines "European protected species of animals".

The combined legislation makes it illegal to: -

- Intentionally kill, injure or capture bats;

- Deliberately disturb bats (whether in a roost or not);
- Damage, destroy or obstruct access to bat roosts;
- Possess or transport a bat or any part of a bat, unless acquired legally; and
- Sell, barter or exchange bats, or parts of bats.

As a signatory to the Bonn Convention (Agreement of Bats in Europe) the UK is also required to protect their habitats, requiring the identification and protection from damage or disturbance of important feeding areas.

2.6 Limitations

This report has been prepared for the benefit of the client and its contents should not be relied upon by others without the written authority of ExCAL Ltd. Unauthorised third party use of this report is done so at the parties' own risk and ExCAL Ltd owe these parties no duty of care or skill.

3.0 SITE LOCATION

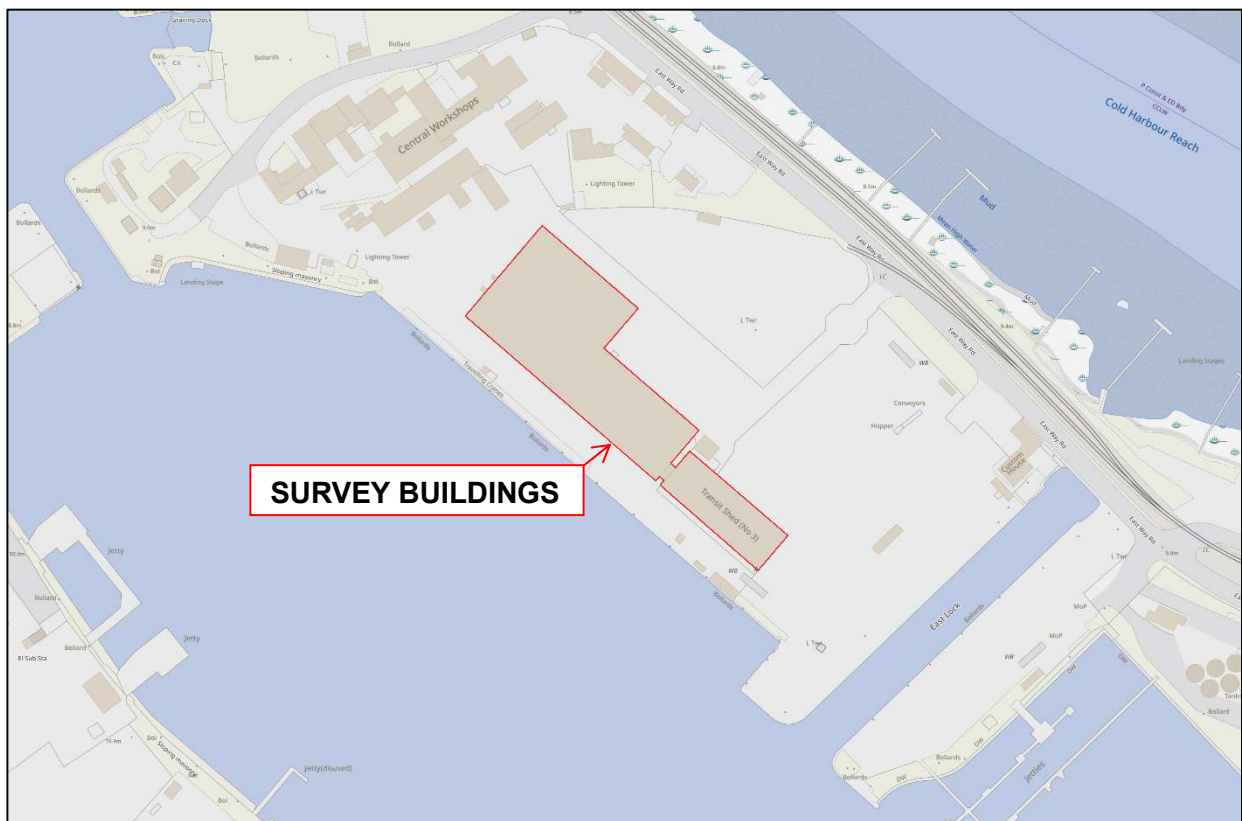
3.1 Site Details

The approximate centre of the survey buildings is located at Grid Reference ST 32070 85235 and the site address is listed below: -

Middle Quay
Associated British Ports
East Way Road
Newport
NP20 2UW.

The location of the survey buildings is visible in Figure 1 below: -

Figure 1 – Survey Buildings



4.0 PRELIMINARY ROOST ASSESSMENT

This report has been designed to comply with the British Standard Biodiversity – Code of practice for planning and development – BS 42020:2013 (BSI, 2013); the Chartered Institute of Ecology and Environmental Management (CIEEM) Guidelines for Ecological Report Writing, Second Edition (CIEEM, 2017) and Bat Conservation Trust – Bat Survey Guidelines, Fourth Edition (Collins, J. 2023).

The buildings were subjected to an internal and external inspection to assess their potential to support roosting bats.

4.1 Desk Study

Local Record Searches were undertaken using Department for Environment, Food & Rural Affairs 'MAGIC' geographic mapping software and the Welsh Government and Natural Resources Wales 'DataMapWales' resource in order to determine the importance of the site from a biodiversity perspective in the context of its surroundings, and to determine the site's proximity to statutory designated sites within a 1km radius of the survey area (if present).

4.2 Field Survey

The buildings were surveyed both externally and internally for evidence of (and potential for) bats. The survey was undertaken by Steve Owen, a licenced surveyor (NRW Licence no: **S090423/1**) on 1st July 2025.

The external inspections were undertaken during daylight hours from ground level. The interior of the buildings were also surveyed extensively for evidence of bats and for potential access/egress points for bats. All interior areas of the buildings were accessible during the survey, and the buildings possess no loft spaces.

4.2.1 Preliminary Roost Assessment for Bats

During the preliminary roost assessment, the following evidence was sought: -

- The presence of potential access and egress routes for bats into and out of likely roosting sites and evidence of the use of such potential access points by bats such as scattered droppings, urine staining or scratching around entrances;
- Corpses or skeletons;
- Feeding remains;
- Bat droppings;
- Likely commuting routes and nearby habitat assessment for potential use by bats;
- Any other signs of use by bats including the presence of bats themselves.

In addition the overall site and its associated wider surroundings were also evaluated for the potential to support commuting and/or foraging bat species.

The internal inspections were undertaken during daylight hours and were aided by the use of a high-powered torch. All areas accessible to bats were searched for evidence of bats, including droppings and feeding remains.

Internal signs of roost access and egress points were also sought out during the survey, examples of these could include; light shining into internal building spaces from the exterior of the building or damage to any internal roof linings.

Bats regularly utilise specific areas within buildings which were searched as a priority for any bat fields signs. Examples of these are outlined below: -

- Dividing walls;
- Underneath ridge beams;
- Beneath hip joints and junctions;
- Timber/wall joints;
- Voids between blockwork;
- Staining above/around gaps;

- Droppings around gaps.

Roosting bats and signs of their presence are not always visible, so any potential bat roosting locations were also noted during the survey.

4.3 Preliminary Roost Assessment Survey Limitations

External and internal inspections for bats can be undertaken at any time of year. The survey was conducted using the recommended equipment and was led by a licenced bat worker.

No significant survey limitations were noted during the survey and as such, no limitations were recorded which may have impacted the robustness of the results of the PRA for bats.

4.4 Desktop Study

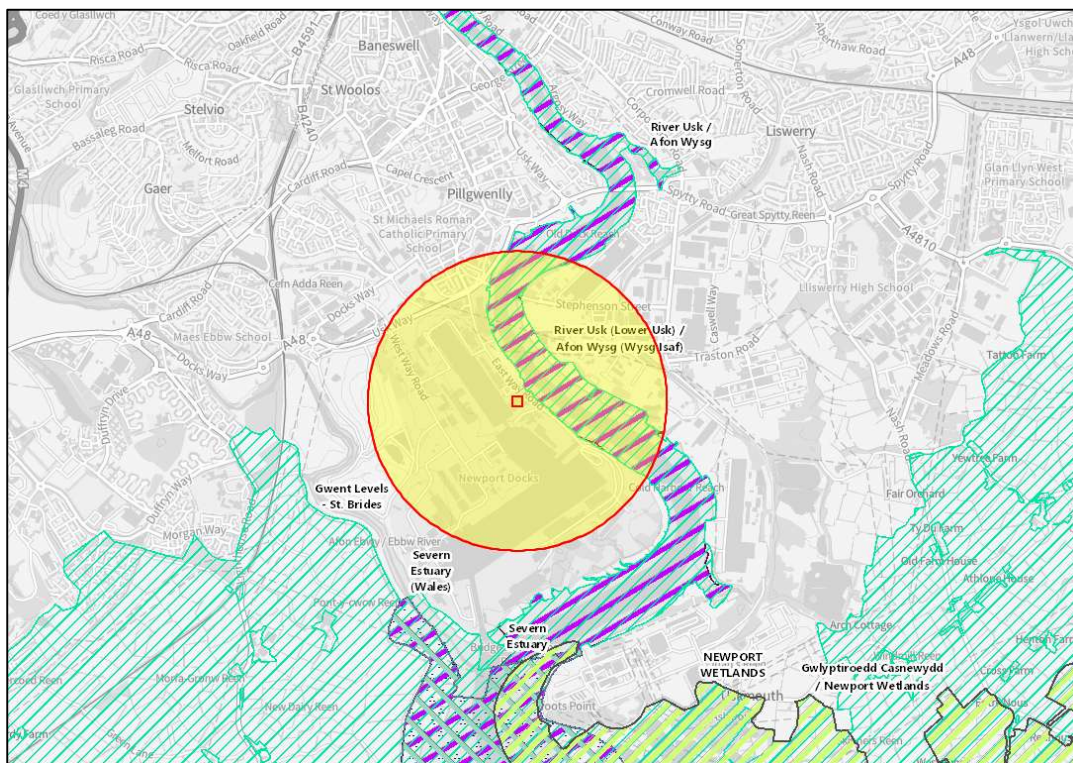
4.4.1 Statutory Designated Sites

The desk study sought to identify records of statutory and non-statutory designated sites within 1km of the survey area.

In total, 2 records of statutory designated sites were returned within 1km of the proposed development site, with both of these relating to the River Usk.

The 1km buffer area along with the site location is visible in Figure 2 below: -

Figure 2 – 1km Buffer Area Search Record for Statutory Designated Sites



Details of statutory designated sites within 1km of the survey area are outlined below: -

- River Usk – Special Area of Conservation (SAC) – 0.15km NE;
- River Usk (Lower Usk) – Site of Special Scientific Interest (SSSI) – 0.15km NE.

River Usk (SAC & SSSI) – Citation

The River Usk comprises a large, linear ecosystem which acts as an important wildlife corridor, an essential migration route and key breeding area for many nationally and internationally important species.

The Usk is of special interest as a fine example of a river running over sandstones and for its associated plant and animal communities. Its character spans a wide range of types from an upland, base-poor stream to a large lowland river with extensive tidal reaches. Its overall diversity is a product of its underlying geology, soil type, adjacent land-use and fluvio-geomorphological regime.

With respect to bats, the frequent tree cover located along the length of the of the lower River Usk provides valuable feeding and roosting habitats for several bat species including Daubenton's bat (*Myotis daubentonii*).

Full citations are available for review in Appendix B – Citations of Designated Sites.

4.4.2 Non-Statutory Designated Sites

The Newport Local Development Plan (LDP) mapping resource was utilised in order to determine whether any non-statutory designated sites are located within 1km of the survey building.

The desk study subsequently returned 2 records of a non-statutory ecologically designated site within 1km of the survey area.

The first of these records consists of the River Usk Special Landscape Area (SLA), with this being located approximately 150m to the north-east of the survey buildings. The second record meanwhile consists of an unnamed Site of Importance for Nature Conservation (SINC) located adjacent to the eastern side of the River Usk 750m to the north.

SLAs represent a non-statutory designation which was identified following a formal assessment of the landscape qualities of the county. In this regard their designation seeks to utilise 'outstanding' categorisations supported where appropriate by those classified as 'high'.

Whilst not intended to necessarily preclude development, it is intended to reflect the emphasis placed upon the term 'special' in their definition. The design of developments should be sensitive enough to ensure that the scheme makes a positive contribution to the landscape. In this regard, proposals will be expected to show that they will not have an unacceptable impact on their specific distinctive features or characteristics of the SLA.

Although there are no protections afforded to SINC's as a result of their designation, they often contain nationally rare, threatened or priority species and habitats, therefore playing a critical role in conservation of the UK's natural heritage.

The non-statutory designated sites located within 1km of the proposed development site suggest that the habitats surrounding the site are likely ecologically rich in nature and in turn likely support protected or priority species.

4.4.3 Ancient Woodland

There are no ancient woodlands within 1km of the survey site.

4.5 Preliminary Roost Assessment for Bats

4.5.1 Building Exteriors

The survey consisted of the inspection of a number of buildings which have been affixed to one another, to make up a large single complex of industrial buildings located at the Middle Quay site.

The buildings being surveyed included: -

- **Shed 4 (Transit Shed No 3)** – A brick building with (suspected) asbestos sheet roof, single-skinned in design. No 3 Transit Shed is approximately 62m x 27m in dimension;

- **Shed 3** – A steel framed and skinned shed of approximate 120m x 33m dimension, affixed to the north-western end of Shed 4. The roof of Shed 3 also consists of suspected asbestos sheets, single-skinned in design;
- **Stores Building** – A more modern steel clad building, affixed to the northern side of Shed 4, toward the north-western end of the building. The roof of this building appears to have been constructed from corrugated steel sheets, and all features were single-skinned in nature, meaning no void is present between sheets (as is the case for double-skinned buildings). The Stores Building is of approximate 60m x 26m dimension.

The configuration of the survey buildings and proximity to one another is visible in Figure 3 below: -

Figure 3 – Survey Building Configuration and Designations



The survey buildings are of generally rectangular shape, with Shed 3 and Shed 4 being affixed end-to-end with one another and a dedicated access point being located between the two buildings to allow internal access for both vehicles and pedestrians. Subsequently, the interior of both buildings creates a singular large space, divided by an open roller shutter / vehicular access ramp located at the south-eastern corner of Shed 3.

The Stores building meanwhile is connected to Shed 3, and is accessible via internal roller-shutter doors which were closed during the survey. Access to the Stores Building was subsequently made via an external roller-shutter door which is opened and closed as necessary for security purposes.

Both Shed 3 and the Stores building consist of steel frame industrial sheds, clad with a combination of corrugated steel and asbestos cladding. Similarly, the roof of the buildings consist of a combination of corrugated steel and asbestos sheet roofing, with clear plastic sheeting being used to create skylights within the roof of all 3 buildings.

The survey buildings when combined are approximately 185m in length at their longest point, and approximately 58m in width at their widest point.

The exterior of the Shed 3 and the Stores Building can be viewed in Figures 4 – 7 below: -

Figure 4 – (NW) Corner of Shed 3 Looking (E)



Figure 5 – (SE) Corner of Shed 3, Looking (SW)



Figure 6 – (SE) Corner of Stores, Looking (W)



Figure 7 – (NE) Corner of Stores, Looking (S)



The exterior walls of both Shed 3 and the Stores building consist of corrugated steel cladding set intermittently on concrete plinths up to roof level, (as visible in Figures 4, 6 and 7).

Although the cladding making up the walls of Shed 3 and the Stores building is single-skinned in nature, the cladding has been further covered with internal fibreglass or similar sheeting in some areas within both sheds, subsequently meaning that a void is present between the exterior and interior wall claddings which may offer roosting opportunity for crevice-dwelling bats in these locations.

The cladding is affixed to the main structure of both buildings, which consists of steel I-beam columns connected horizontally by longitudinal steel beams. Each column has an associated steel rafter to support the corrugated mixed asbestos and steel sheet gable roofs which are overlaid on steel purlins and latticed framework. The underside of the roof has been clad internally in many areas within the Stores building and within the majority of Shed 3 with box cladding, meaning a void is present between the exterior roof sheets and interior cladding within these locations. This is particularly noticeable within Shed 3.

The underside of the roof panels is visible in some areas of both Shed 3 and the Stores building, owing to damage to the underside of the cladding enabling a line of sight to the roof in these locations.

The condition of the cladding making up the walls and roofs of both sheds was observed to be in generally excellent condition however, with no significant areas of damage being recorded which may permit crevice-dwelling bats to potential roosting features situated within the identified voids between exterior and interior areas of the building.

A large roller shutter door is present on the north-western wall of Shed 3. This access point subsequently enables the free access/egress of both crevice and void-dwelling bats to potential roosting features located within the interior of Shed 3.

Shed 4 meanwhile is different from both Shed 3 and the Stores building. Shed 4 has been constructed from brick, and although the asbestos roof panels are similarly supported by a latticed steel framework, the underside of the roof is not visible owing to the roof sheets having been set on tightly-sealed timber boards.

Photographs of Shed 4 are visible in Figures 8 – 11 below: -

Figure 8 – (SW) Corner of Shed 4, Looking (N)



Figure 9 – (SE) Corner of Shed 4, Looking (W)



Figure 10 – Damage to Timber Soffit on (SW) Corner of Shed 4, May Offer Potential Roosting Opportunity for Crevice-Dwelling Bats



Figure 11 – Damage to Windows on (NE) Wall of Shed 4, Offers Potential Access/Egress for both Crevice and Void-Dwelling Bats to Shed 4 Interior via these Areas



Shed 4 is constructed from engineering bricks, which were observed to be in generally excellent condition given the likely age of this section of the building. Small holes, cracks and missing bricks /mortar were recorded in some areas from the exterior of the building however, and these were assessed to potentially provide roosting opportunity for crevice-dwelling bats.

Significant damage was also recorded to the timber soffit boxes located on the south-eastern end of Shed 4, offering potential roosting opportunity for crevice-dwellers on this section of the building (as visible in Figure 10). It should be noted however that the areas of damage are considered substantial enough that limited protection from external elements would be afforded for bats within these timber features.

The roof of Shed 4 is constructed from corrugated asbestos sheeting, which was observed to be in generally good condition with limited areas of damage being recorded during the PRA. The sheeting has been overlaid onto timber boards however, creating a potential void which could be utilised by crevice-dwelling bats between the outer roof sheets and inner timber cladding. Gaps are present within the design of the ridge tiles of the building, which further increases the possibility of use by crevice-dwellers.

Numerous windows are present on the eastern wall of Shed 4, with many having been boarded up with timber. Some of the windows are however exposed, and damage to the glass panes was recorded (as visible in Figure 11) which may afford the free access/egress of both crevice and void-dwelling bats to the building interior via these avenues. Small gaps present between the timber boarding and windows were assessed to potentially offer some roosting potential for opportunistic crevice-dwellers.

A number of UPVC skylights are present within the roof of Shed 4. Although in generally good condition, some areas of damage to the UPVC skylights was recorded during the PRA, further enabling the potential free access/egress for bats to the building interior via these locations.

The aforementioned skylights and windows do however afford a high level of natural light across the interior of Shed 4, reducing the buildings' potential to be utilised consistently as a day roost.

A number of steel roller-shutter doors and timber single and double pedestrian accesses are located across all 3 buildings. Many of these were found to be open or exhibited small areas of damage; enabling free access/egress to the building interior via these avenues, particularly with respect to Shed 3 & Shed 4 (an example of one of the open roller-shutter doors is visible in Figure 4).

4.5.2 Building Interiors

As discussed, Shed 3 and Shed 4 are affixed and connected internally by a vehicular access – subsequently, the interior of these buildings is open in nature, enabling free traversal for bats around the building interiors and to potential roosting features situated within.

This is particularly possible due to the aforementioned sections of damage to various features of the building (UPVC skylights, glass windows, missing bricks) which enables the free access/egress for bats to the building interiors via these avenues. Furthermore, numerous open doorways also enable the free entry for bats to the building interiors across both Shed 3 and Shed 4.

The Stores building meanwhile is less accessible than both Shed 3 and Shed 4. Although it is connected to Shed 3, the roller shutter doors enabling internal access were found to be closed and well-sealed, and no direct access points from the interior of Shed 3 to the Stores building were observed during the PRA.

All external doors of the Stores building were observed to be closed during the survey, and were only opened to enable access for the interior inspection of the PRA to take place. Furthermore, no areas of damage to the cladding or panels making up the roof of the Stores building was identified during the survey, reducing the building's accessibility and subsequent potential to be utilised by roosting bats.

The interior of the survey buildings can be viewed in Figures 12 – 21 below and overleaf: -

Figure 12 – Shed 4 Interior, Looking (SE)



Figure 13 – Shed 4 Interior, Looking (NW)



Figure 14 – Tightly Sealed Timber Boards Affixed to Underside of Shed 4 Roof Panels



Figure 15 – Small Cracks in Interior Brickwork of Shed 4 Offer Roosting Potential for Crevice-Dwelling Bats



Figure 16 – Shed 3 Interior, Looking (SE). Underside of Roof Visible on Right, but Covered by Cladding in Left of Image



Figure 17 – Shed 3 Interior, Looking (NW). Light Ingress via Open Roller-Shutter Door Visible, Enabling Free Access/Egress for Bats to Interior of Shed 4



Figure 18 – Cladding on Underside of Roof of Shed 4 Interior Creates Void, Offering Potential Roosting for Crevice and Void-Dwelling Bats. Missing Section Enables Potential Access / Egress for Bats



Figure 19 – Cladding in (SW) Corner of Shed 3, Covering Interior Wall of Building. Void between External Panels Making up Shed Walls and Interior Cladding May Offer Potential Roosting Opportunity for Crevice and Void-Dwelling Bats. Damaged Panels Noted



Figure 20 – GF Stores. Interior, Looking (SE)**Figure 21 – 1st Floor Stores, (NW)**

All 3 of the buildings possess A-shaped gable roofs which are supported by steel I-beam framework and associated bracing beams, purlins and rafters.

The roofs consists of corrugated asbestos / steel sheets interlaced with numerous skylights, some of which were found to be damaged allowing the ingress of water and potential free access/egress of bats to the building interiors in some locations (particularly within Shed 4). Consequently, the building is very well lit by natural light throughout most areas of Shed 4 and the Stores building during daylight hours.

The skylights are covered within Shed 3 however, whereby interior cladding is present which covers the underside of the roof in many locations (as visible in Figures 16, 17 & 18). This cladding acts as a suspended ceiling, into which light fixtures have been set. The lighting within Shed 3 remains on at all times for security purposes, which significantly lowers this area of the building from being utilised as a day-roost.

A number of steel purlins and rafters are present within the building interior, and these were identified to be potentially suitable for free-hanging bats, whilst there is also adequate space within the buildings which would be suitable for void-dwelling bats.

There is however a lack of shelter within the buildings (owing to their open interior nature, with the interior rooms of most buildings progressing from ground level straight up to the roof). Subsequently, there are no lofts or other areas present within the survey buildings which are of sufficient space, shelter, protection or possess the suitable conditions to be used on a regular basis by larger numbers of bats, particularly with respect to aforementioned void-dwellers.

The interior of the buildings are not thought to be suitable for hibernation roosts, due to the variable interior temperatures resulting from numerous open doorways and areas of damage around the buildings, along with the open nature of the building interiors.

Sheds 3 & 4 are currently unoccupied, however, the Stores building experiences continued use to support port activities. Traffic movements and industry around the buildings are therefore frequent, with a number of engineering companies and large plant being active in the nearby vicinity of the survey buildings. Subsequently, the levels of noise and disturbance within and around the building have historically, and continue to be high.

A number of potential roosting features were recorded within the building interiors during the survey, with these primarily being focussed in and around the brick constructed Shed 4 building.

Small cracks within interior brickwork were identified to offer some potential to support crevice-dwelling bats, whilst there is likely a small void present between the interior timber cladding and exterior roof panels which may also offer further roosting potential for these species.

All areas of the survey building interiors were surveyed extensively for evidence of bats in the form of feeding remains, smudging, droppings, live bats etc. Similarly, the joints between steel joists and rafters, along with connections between external cladding and the interior steel framework were inspected extensively for signs of bat use and for any gaps which may be suitable for crevice-dwelling bats.

4.5.3 Signs of Bats

The survey buildings were inspected for evidence of bats including but not limited to; feeding remains, droppings, smudging, staining and other evidence during the PRA.

Evidence of bats was identified during the PRA. Further information is provided below: -

- **Droppings Identified within Shed 3 & Shed 4** – a small number of droppings (10 – 20) were identified scattered throughout both Shed 3 and Shed 4. The droppings were well-spread throughout the buildings, and not focussed in any single location.

Photographs of some of the droppings are visible in Figures 22 & 23 below: -

Figure 22 – Bat Droppings on Equipment in Shed 4



Figure 23 – Bat Dropping on Timber Stored within Builder's Bag in Shed 3



No additional evidence of bats was recorded throughout the rest of the building interiors during the PRA.

4.5.4 Potential Access for Bats

Numerous potential access/egress points for bats to the building interiors were recorded during the PRA, with these being primarily focussed within Shed 3 and Shed 4.

The Stores building was generally well-sealed in comparison with the rest of the surveyed buildings.

Potential access areas and locations within the buildings are outlined in further detail below:-

- **Open / Damaged Roller Shutter Doors and Pedestrian Accesses around Shed 3 & Shed 4** – A number of open and damaged doorways are located around Shed 3 and Shed 4. An open roller shutter door is present on the north-western side of Shed 3, permitting free access/egress for bats to the building interior via this avenue. Furthermore, damaged / slightly open pedestrian accesses are present on the southern walls of Shed 3 and Shed 4, enabling further potential access/egress to the respective building interiors in these locations. Gaps around the edges of closed doorways and between and above roller shutter doors were also recorded during the survey that would provide access opportunities even in the event that the doors are closed;
- **Damage to UPVC and Glass Skylights and Windows in Shed 4** – Areas of damage were recorded to UPVC skylights along with the glass windows on the southern side of the building. A large section of damage was recorded to the UPVC windows on the southern side of the large, central asbestos clad building (as visible in Figure 7), and these gaps were deemed to be of sufficient size to enable both void-dwelling and crevice-dwelling bats to access the building interiors via these areas;
- **Damaged / Missing Brickwork in Some Areas of Shed 4** – Although in a generally good state of repair, a small number of gaps and missing bricks were recorded within the brickwork making up the walls of Shed 4. These gaps were considered of sufficient size to enable both crevice-dwelling and void-dwelling bats to enter the respective building interiors in each location;

- **Open Plan Nature of Building Interior, Connecting Shed 3 & Shed 4** – Due to the open plan nature of the interior of the survey buildings, any bats which are able to access the building interior via any of the above avenues are subsequently able to fly freely throughout the vast majority of the building interior. The interior of the Stores building is separated from the remaining interiors, with this section of the building being well-sealed, with limited access/egress points for bats being identified.

4.5.5 Potential Features for Bats

The interior of the building was inspected thoroughly for suitable features for bats and any evidence of bat use.

As discussed, a number of potential access / egress points to the building are present which may allow bats to enter the building interior and access potential roosting features identified during the survey.

Potential roosting areas identified within the buildings include: -

- **Steel Roof Features:** A number of exposed steel roof support features, including rafters, purlins and ridge beams were identified on the underside of the roofs of the survey buildings, which may be suitable for both free-hanging and crevice-dwelling bats. Although the steel framework making up the roof features of the buildings was identified to provide some limited roosting habitat for free-hanging bats, the interior of the building is open and exposed in nature, reducing the building's potential to be utilised consistently and by a larger number of bats;
- **Intersections between Steel Framework of Roof and Brickwork Walls of Shed 4:** Gaps are present around areas whereby steel framework making up the roof of Shed 4 intersect with the respective brickwork features within each location. These gaps offer potential roosting opportunity for crevice-dwelling bats;
- **Small Cracks within the Brickwork of the Survey Buildings:** Small isolated cracks are located around the masonry of the building, particularly with respect to Shed 4, which may offer potential roosting opportunity for crevice dwelling bats;
- **Gaps between Roof Panels and Timber Interior Cladding in Shed 4:** A small gap / void is likely present between the exterior roof panels and internal timber cladding present beneath the panels in Shed 4. Although in generally good condition, there is the potential that crevice-dwelling bats may be able to access the void and associated PRFs via unrecorded areas of damage;
- **Void between Interior Ceiling and Wall Cladding / Insulation and Exterior Wall and Roof Panels in Shed 3:** Voids are present between interior cladding and exterior wall and roof panels within Shed 3. There is the potential that both crevice and void-dwelling bats may be able to access these void and associated PRFs via damaged areas of cladding / insulation;
- **Open and Well-Connected Nature of Shed 3 & Shed 4:** The interior of the survey building is open in nature, owing to Shed 3 and Shed 4 being connected by an internal vehicular access. Subsequently, the building interior provides ample space for both crevice and void-dwelling bats to traverse the entirety of the building and access PRFs within either shed;
- **Damaged Timber Soffits on SE End of Shed 4** – Some damage was recorded to the timber soffits located on the south-eastern exterior wall of Shed 4. Gaps of sufficient size are present, enabling potential access/egress for crevice-dwelling bats to potential roosting features located within;

The survey concluded that; given that evidence of bats was identified during the PRA along with the observed presence of PRFs within the building interiors, in conjunction with potential access/egress points to these features, **the survey buildings possess a low (confirmed roost) potential to support roosting bats.**

4.5.6 Surrounding Habitat

The buildings are situated on an active port, and subsequently, the majority of the surroundings consist of docks and associated industrial units.

Alexandra Dock and North Dock are located immediately to the west and north-west of the survey buildings respectively, whilst the immediate surroundings of the survey buildings consists primarily of hardstanding, whereby the site used to be utilised for materials storage and sorting. A small area of mixed grass and scrubland is located approximately 50m to the north of the buildings, whilst an additional small area of woodland is also located approximately 100m to the north-east.

These habitats were assessed to provide low suitability for bats, although there is likely some foraging opportunity due to the invertebrate interest identified within these areas. It should be noted however, that roosting opportunities for bats within the surrounding habitat is limited.

Although connectivity between the surrounding habitats to better foraging habitat elsewhere are poor (from the perspective of green linkages such as hedgerows, tree lines, continuous green corridors etc.), the River Usk (SAC & SSSI) is located approximately 150m north-east of the survey building.

The frequent tree cover located along the length of the of the lower River Usk provides valuable feeding and roosting habitats for several bat species including Daubenton's bat, and subsequently, bats may utilise the riparian zones of the Usk to commute from the site to better foraging habitat further away from the survey area.

With the above being said, the surrounding habitat on the whole has been assessed to provide low suitability for bats, due to its isolated nature and poor connectivity.

The wider landscape of the area consists of a combination of pastoral fields and associated hedgerows, with Newport Wetlands being located approximately 1.3km to the south-east of the site, whilst significant industrial sites including a landfill and Cogent Power are located approximately 1.1km west and 1.2km north-east of the survey area respectively. Newport city centre is located approximately 3km to the north of the site.

5.0 DISCUSSION AND RECOMMENDATIONS

5.1 BCT Good Practice Guidelines

5.1.1 Suitability of Proposed Development Sites for Bats

Table 4.1 within the BCT Good Practice Guidelines state the following guidelines for assessing the potential suitability of proposed development sites for bats, based on the presence of habitat features within the landscape, to be applied using professional judgement: -

- **None:** - No habitat features on site likely to be used by any roosting bats at any time of the year (complete absence of crevices / suitable shelter);
- **Negligible:** - No obvious habitat features on site likely to be used by roosting bats, however a small element of uncertainty remains as bats can use small and apparently unsuitable features on occasion;
- **Low:** - A structure with one or more potential roost sites that could be used by individual bats opportunistically at any time of the year. However, these potential roost sites do not provide enough space, shelter, protection, appropriate conditions and/or suitable surrounding habitat to be used on a regular basis or by larger number of bats; (i.e. unlikely to be suitable for maternity or hibernation);
- **Moderate:** - A structure with one or more potential roost sites that could be used by bats due to their size, shelter, protection, conditions and surrounding habitat, but unlikely to support a roost of high conservation status (with respect to roost type only, such as maternity and hibernation);
- **High:** - A structure or tree with one or more potential roost sites that are obviously suitable for use by larger number of bats on a more regular basis and potentially for longer periods of time due to their size, shelter, protection, conditions and surrounding habitat. These structures have the potential to support high conservation status roosts e.g. maternity or classic cool/sable hibernation site.

5.1.2 Presence / Absence Surveys for Bats

Furthermore, BCT Good Practice Guidelines state that further surveys (particularly presence/absence surveys) are required if: -

- The preliminary roost assessment has not ruled out the reasonable likelihood of a roost being present (because there are locations with potential for bats to roost undetected in concealed cracks, crevices or voids), but no definitive evidence of the presence of bat roosts has been recorded;
- Potential roost features inspection survey has identified moderate and high suitability potential roost features, but no definitive evidence of the presence of bats has been established;
- A comprehensive inspection survey is not possible due to restricted access, but features are present with a reasonable likelihood of supporting bats;
- There is a risk that evidence of bat use may have been removed by weather or human activities.

The aims of these surveys would be to determine the presence or absence of bats at the time of the survey and the need for further surveys and/or mitigation.

If sufficient areas of a structure have been inspected and no evidence found, then further surveys may not be appropriate.

However, if there is a reasonable likelihood that bat roosts could be present and particularly if there are areas inaccessible for survey, then further surveys may be required proportionate to the circumstances encountered.

5.1.3 Roost Characterisation Surveys

Where evidence of bats has been established during a PRA (for example, where droppings are found), roost characterisation surveys in the form of dusk emergence surveys should be undertaken.

The aim of roost characterisation surveys and dusk emergence surveys is to establish: -

- Are bat roosts present or likely to be absent;
- Which bat species use the site for roosting;
- How many bats do these roosts support;
- Where are the bat roost access points;
- Where are the bat roosts;
- At what times of the year are bats present, and how does use change seasonally;
- What types of bat roost are present;
- What flight-lines do the bats use after emerging from the roost has been identified during a PRA.

By answering the above questions, a licenced ecologist will be able to undertake an impact assessment, and design a mitigation, enhancement and monitoring strategy where relevant.

The level of survey effort required to collect the relevant information to design an impact assessment and associated mitigation strategy is site-specific, and appropriate surveys should be repeated until the above information has been collected. Appropriate methods and equipment should be used to minimise the number of repeat visits however, and effort should always be proportionate to impact.

Where presence of bats is established during a PRA, but roost characterisation surveys have not recorded any bat presence, it may be necessary to carry out further surveys at alternative times of the year.

It should be noted however that further surveys may provide no return, and it may be necessary to proceed with the information collected from both the PRA and surveys undertaken to date in this instance.

5.2 Discussion

5.2.1 Preliminary Roost Assessment Summary

The buildings at Middle Quay were surveyed in detail on 1st July 2025 to assess their potential to support roosting bats.

The PRA concluded that the survey building possesses a **low (confirmed roost)** potential to support roosting bats.

Direct evidence of bat use in the form of droppings was identified within Shed 3 and Shed 4, whilst numerous PRFs were identified within the interiors of the survey buildings.

Furthermore, numerous potential access/egress points for bats to the building interiors are present, particularly with respect to Shed 3 and Shed 4, and the building interiors were concluded to be of sufficient size to potentially support void-dwelling bats.

However, the poor quality of PRFs identified during the survey reduces the likelihood that the building is being utilised on a regular basis, or by a larger number of bats, particularly with respect to void-dwellers. The buildings were assessed to provide some potential to support crevice-dwelling species however.

The PRA concluded that the survey buildings possess some potential to be utilised by bats, for example as either a day or night roost. The building was concluded as being unlikely to be suitable for a maternity or hibernation roost however, and no evidence was identified during the PRA which would support the presence of either of these roost types.

5.3 Recommendations

The survey building was assessed as having **low (confirmed roost)** potential to support roosting bats, and, due to evidence of bats being identified during the PRA, **roost characterisation surveys** in the form of **dusk emergence surveys** will be required in order to establish how bats are utilising the survey building.

The methodology of the surveys requires a suitably qualified surveyor to visit the property at dusk to listen for and record bats via the use of a bat detector, and watch for bats emerging from roosts where present within the building.

The recommendation is subsequently made that a **minimum of one dusk emergence survey** should be sufficient to provide additional information to categorise the roost and determine which species are utilising the survey buildings.

The timing of the survey should be undertaken during the optimal time of May to September with respect to bats.

As a result, the following measures are recommended with regard to the building: -

- Roost characterisation surveys will be required in the form of **a minimum of one dusk emergence survey** to categorise the roost identified within the building and to determine which species are utilising the building for roosting purposes. This will inform any further survey work where required, and will enable appropriate mitigation relative to the proposals and species to be designed, which will inform an EPSL application.

6.0 ROOST CHARACTERISATION SURVEYS

The PRA had previously concluded that the survey buildings possess **low** potential to support roosting bats, due to the buildings possessing a number of PRFs which may be used opportunistically by both crevice and void dwelling bats.

Furthermore, a number of potential access / egress points to these roosting features were also recorded, and evidence of bats in the form of droppings was identified during the PRA.

Further to the result of the PRA, it was determined that **the buildings should be subjected to a minimum of one roost characterisation dusk emergence survey** to enable the numbers and species of bats which are utilising the buildings to be determined.

The results of the survey will then be used to inform appropriate mitigation which will be required to enable the proposals whilst minimising any detrimental impact on bats.

The dusk emergence survey therefore aims to provide further evidence to support or contradict the conclusions of the PRA report in order to inform whether further survey work is required, and ultimately determine how bats utilise the buildings for roosting purposes.

The results will also enable necessary mitigation to be designed in order to facilitate the proposals at the site whilst minimising the impact on roosting bats.

6.1 Activity Surveys

An initial dusk emergence survey was undertaken on 29th July 2025 by Steve Owen; a licenced bat surveyor (NRW Licence no: **S093409/1**) who was assisted by an additional experienced ecologist. Further to the results of the initial dusk emergence survey, a second dusk emergence survey was also undertaken on 16th September 2025.

Visual observations were supported by the use of ultra-sonic bat detectors. A combination of frequency division and real time expansion hand-held detectors (Anabat Express, Echo Meter Pro 2 & Heterodyne) were used, which detect ultra-sonic bat calls.

Dusk emergence surveys using bat detectors are techniques used for locating roosts and gauging general bat activity in the area, and in this instance to determine whether the buildings within the survey area support roosting bats. The technique is based on the following principles: -

- The earlier a bat is observed at sunset, then the closer the roost (species dependent) is likely to be in relation to the surveyor's location;
- Bats fly away from their roost at sunset and the property was observed for emerging bats.

6.2 Analysis

Bat echolocation calls were analysed using Analook software and bat species identified by comparison of sonograms with a reference of echolocation call parameters and library of known echolocation calls. Echolocation calls were assigned to species level where possible. Where this was not deemed possible, identification to genus level was made.

6.3 Survey Limitations

The emergence surveys were undertaken within the optimal time of year to undertake activity surveys (May – September), with the surveys having been undertaken on 29th July 2025 and 16th September 2025 respectively.

Weather conditions in the preceding days had been fine, whilst the conditions on the day of the surveys were optimal.

The emergence survey provides a snapshot of the bat activity within the survey area at the time of survey itself. However, the survey results are considered to provide a realistic picture of the bat activity within the survey area, and best practice survey guidelines were followed.

Bat surveys undertaken using bat detectors are inherently biased as bats with louder calls (such as the *Nyctalus* species) will be recorded at a greater distance (and therefore more frequently) than species which use quiet calls such as *Plecotus* spp.

Long-eared bat (*Plecotus* spp.) is a species that generally only emerges in full darkness and which has a very quiet echolocation call, generally not detectable in the open if more than 2-3 m from the bat detector. As a result, long-eared bats are difficult to detect during activity surveys and it is likely this species is under-recorded during such surveys.

Species identification by sonogram is limited (to a certain extent) by similarities in call structure. In addition, all bats can modulate their calls according to the habitats they are navigating, their behaviour and the information they require at the time. This imposes limitations on reliable analysis particularly between species in the genera *Plecotus*, *Myotis* and *Nyctalus*.

No rainfall occurred during the surveys and the weather conditions were considered to be optimal to undertake activity surveys, with low wind speeds and a temperature which remained above 10°C throughout the duration of the activity.

The above survey limitations are unavoidable, and it is considered that they have not affected the robustness of the survey results for the purpose of this study. Therefore, it is considered that there were no limitations to the activity survey works.

6.4 First Activity Survey for Bats – Dusk Emergence Survey, 29/07/25

An initial dusk emergence survey was undertaken on Tuesday 29th July 2025.

The dusk survey commenced 30 minutes before sunset and continued for 2 hours after sunset. Details of the survey are provided in Table 1 below: -

Table 1 - Activity Survey Details

	Dusk Emergence Survey
Date	29/07/25
Weather Conditions	15°C, 20% cloud cover, wind Beaufort Scale 1, no rain throughout survey.
Sunset	21.05
Start time	20.35
Finish time	23.05

Two Anabat Express detectors were set up for the survey, with an additional two Wildlife Acoustics Echo Touch Pro 2 bat detectors also being utilised.

Details are available below: -

- **Anabat Express 15** – this detector remained in a static location, facing toward the NW aspect of Shed 3;
- **Anabat Express 16** – this detector remained in a static location, facing toward the SE aspect of Shed 4;
- **Echo Touch Pro 2** – each surveyor had a dedicated detector to identify emerging, foraging and commuting bats.

Observations made during the survey are listed below: -

Table 2 – Activity Survey Results

Record Number	Time	Description
n/a	21.05	SURVEY START;
1	21.46	Common pipistrelle (<i>Pipistrellus pipistrellus</i>) observed foraging along front (NE) of Shed 4;
2	21.51	Common pipistrelle observed flying within Shed 4 before emerging from broken window on (NE) wall of Shed 4;

3	22.11	Common pipistrelle observed commuting from (SE) to (NW) in front of Shed 4;
4	22.12	Soprano pipistrelle (<i>Pipistrellus pygmaeus</i>) detected by heterodyne but not observed (in between Shed 3 & Shed 4);
5	22.24	Common pipistrelle observed commuting from woodland at (E) of the site over the top of Shed 3 toward the docks;
6	22.26	Leisler's bat (<i>Nyctalus leisleri</i>) detected by heterodyne, but not observed;
7	22.33	Noctule (<i>Nyctalus noctula</i>) detected by heterodyne, but not observed;
8	22.36	Common pipistrelle detected by heterodyne, but not observed;
9	22.44	Common pipistrelle observed foraging in circles above Shed 3;
10	22.45	Soprano pipistrelle observed flying within Shed 4;
11	22.50	Soprano pipistrelle observed to emerge from broken window on (NE) side of Shed 4;
12	22.57	Common pipistrelle observed foraging around buddleia at front (NE) of Shed 3;
13	23.00	Common pipistrelle observed to emerge from broken window on (NE) wall of Shed 4;
14	23.00	Noctule detected by heterodyne but not observed;
15	23.01	Noctule observed commuting above Shed 3;
16	23.02	2 common pipistrelles observed foraging in loops above and around Shed 3;
17	23.05	SURVEY END

6.5 Summary of First Activity Survey

Acoustic analysis of the Anabat Express bat detector was undertaken using Analook Insight software, allowing the full frequency of the bat call to be analysed in greater detail.

Furthermore, the Echo Touch Pro 2 detector enables live readouts of the species encountered during the survey to be made.

A number of bat calls were recorded over the duration of the survey, and these calls were analysed against the observations made by the surveyor, and the sonographs utilised to aid with the identification of bats to species level. The analysis of these data also validates the observations made by the surveyor at the same time both visually and on the heterodyne detectors.

A summary of the findings of the first dusk emergence surveys is provided below: -

- A total of **3 bats were observed to emerge from the survey building**, with all of these emerging from the (NE) aspect of Shed 4. The **survey building is therefore a confirmed bat roost**;
- Bats suspected to have emerged from the survey building include **soprano pipistrelle and common pipistrelle**;
- Bat abundance on the survey night was low, likely due to a lack of suitable foraging habitat in the immediate vicinity of the survey buildings;
- Bats recorded during the activity survey include; common pipistrelle, soprano pipistrelle, Leisler's bat and noctule;
- Commuting opportunity between the survey site and higher quality feeding habitat further afield is generally poor, although the River Usk and associated riparian zone situated approximately 150m to the north-east offers some commuting and foraging opportunity for bats;
- Foraging activity was primarily focused around the front (north-east) of the buildings, whereby small isolated areas of buddleia offer some foraging potential within these locations.

6.6 Second Activity Survey for Bats – Dusk Emergence Survey, 16/09/25

Based upon the results of the initial dusk survey undertaken in July 2025, the recommendation was made that an additional dusk emergence survey should be undertaken in order that the confirmed roost within the building could be further categorised, and to identify whether additional species are utilising the survey building.

A second dusk emergence survey was subsequently undertaken on 16th September, 2025.

The dusk survey commenced 30 minutes before sunset and continued for 2 hours after sunset. Details of the survey are provided in Table 1 below: -

Table 3 - Activity Survey Details

	Dusk Emergence Survey
Date	16/09/25
Weather Conditions	13°C, 40% cloud cover, wind Beaufort Scale 1, no rain throughout survey.
Sunset	19.24
Start time	18.54
Finish time	21.24

Two Anabat Express detectors were set up for the survey, with an additional two Wildlife Acoustics Echo Touch Pro 2 bat detectors also being utilised.

Details are available below: -

- **Anabat Express 15** – this detector remained in a static location, facing toward the SW aspect of Shed 3;
- **Anabat Express 16** – this detector remained in a static location, facing toward the NE aspect of Shed 4;
- **Echo Touch Pro 2** – each surveyor had a dedicated detector to identify emerging, foraging and commuting bats.

Observations made during the survey are listed below: -

Table 4 – Activity Survey Results

Record Number	Time	Description
n/a	18.54	SURVEY START;
1	19.36	Common pipistrelle observed commuting from (NE) to (SW) above of Shed 4;
2	19.42	Noctule detected on heterodyne, but not observed;
3	19.50	Common pipistrelle observed commuting from (SW) to (NE) above Shed 3 and Stores building;
4	19.55	Soprano pipistrelle detected by heterodyne but not observed;
5	20.02	Common pipistrelle observed to emerge from broken window on (NE) side of Shed 4;
6	20.03 – 20.07	Common pipistrelle continued to forage along northern side of Shed 3 and Shed 4;
7	20.06	Noctule detected by heterodyne, but not observed;
8	20.15	Soprano pipistrelle detected by heterodyne, but not observed;
9	20.16	Soprano pipistrelle observed to emerge from broken window on (NE) wall of Shed 4;
10	20.22	Noctule observed commuting from (SW) to (NE) above Shed 4;
11	20.28	Common pipistrelle detected on heterodyne, but not observed;
12	20.32 – 20.39	Common pipistrelle observed foraging around buddleia at front (NE) of Shed 3;
13	20.55	Soprano pipistrelle observed commuting from (NE) to (SW) above Shed 3;
14	20.56	Common pipistrelle observed to emerge from broken skylight within roof of Shed 4;
15	21.04	Noctule detected on heterodyne, but not observed;
16	21.12	Common pipistrelle observed commuting from (E) to (W) at along (S) side of Shed 3;
17	21.19	Common pipistrelle observed foraging along northern side of Shed 3 and Shed 4;
18	21.24	SURVEY END

6.7 Summary of Second Activity Survey

A summary of the findings of the second dusk emergence survey is provided below: -

- Once again, a total of **3 bats were observed to emerge from Shed 4**, with 2 of these emerging from the (NE) aspect of Shed 4 and a 3rd emerging from a broken skylight in the roof of the building;
- Bats observed to have emerged from the survey building include **soprano pipistrelle and common pipistrelle**;
- Bat abundance on the survey night was again relatively low, likely due to a lack of suitable foraging habitat in the immediate vicinity of the survey buildings;
- A total of 3 bat species were recorded during the activity survey, and these include; common pipistrelle, soprano pipistrelle and noctule;
- Commuting opportunity between the survey site and higher quality feeding habitat further afield is generally poor, although the River Usk and associated riparian zone situated approximately 150m to the north-east offers some commuting and foraging opportunity for bats;
- Foraging activity was once again primarily focused around the front (north-east) of Shed 3 and Shed 4, whereby small isolated areas of buddleia offer some foraging potential within these locations.

7.0 PRA AND DUSK EMERGENCE SURVEYS – DISCUSSION AND RECOMMENDATIONS

7.1 Summary of Survey Effort

7.1.1 Preliminary Roost Assessment Summary

The survey buildings at Middle Quay were assessed as having the potential to support roosting bats due to the presence of a number of PRFs for both void and crevice-dwelling bats being identified within the building interiors during the PRA.

Furthermore, a number of potential access points to the building interiors were recorded, which have the potential to enable bats to freely access the PRFs located within the buildings, particularly within Shed 4 and to a lesser extent Shed 3. Evidence of bats in the form of droppings was also identified on the floors of both Shed 3 and Shed 4 during the PRA.

Due to the presence of PRFs within the buildings along with numerous potential access/egress points to these features and direct evidence of bats being identified during the PRA, the survey building's potential to support roosting bats was classified as **low (confirmed roost)**.

As a result of the above, the recommendation was made that roost categorisation surveys should be undertaken in order to categorically determine the presence/absence of bats within the buildings, and in order to identify which species utilise the buildings, their likely numbers, and roost locations, type and access points.

Subsequently, the recommendation was made that a minimum of one dusk emergence survey should be undertaken in order to determine the above information.

7.1.2 Summary of Dusk Emergence Surveys Undertaken in July & September 2025

An initial roost characterisation survey (in the form of a dusk emergence survey) was undertaken on 29th July 2025 to fully assess the status of bats at the survey building and inform of constraints upon the proposed project. The survey was undertaken during the peak bat survey period and in accordance with current best practice bat survey guidelines.

Based upon the results of the initial dusk emergence survey, the recommendation was made that the building should be subjected to a second survey, to ensure that sufficient information relating to bat roosts within the survey building was obtained.

Subsequently, a second dusk emergence survey was undertaken of the buildings at Middle Quay on 17th September 2025..

A summary of the findings of the dusk emergence surveys is provided below: -

- The buildings and their condition offered several opportunities for bat occupation and roosting potential;
- The building is located in an area with generally poor ecological connectivity for bats to the surrounding environment, although the nearby River Usk offers good foraging and commuting opportunity for a number of different species of bat;
- A low number of bat calls were recorded during the emergence surveys, with a total of 4 bat species being recorded during the surveys (common pipistrelle, soprano pipistrelle, Leisler's bat and noctule);
- A total of **3 confirmed individual bats across at 2 species** were recorded to emerged from the building during the first survey (July 2025), with these consisting of **2 common pipistrelles and 1 soprano pipistrelle**;
- A total of **3 confirmed individual bats across at 2 species** were recorded to emerged from the building during the second survey (September 2025), with these consisting of **2 common pipistrelles and 1 soprano pipistrelle**;

- Based upon the results of the preliminary roost assessment and subsequent activity surveys, the survey building is a **confirmed summer non-breeding day roost for both soprano pipistrelle and common pipistrelle**;
- **The building is now a confirmed bat roost. No work that could affect the bat roost is permitted by law, without the permission and/or under licence from Natural Resources Wales, including any works to the roof. Direct illumination of the building is also not permitted, as this could constitute disturbance**;
- The emergence surveys did not identify a maternity roost. Based upon the evidence gained during the PRA and subsequent emergence surveys, the bats using the building as a roost are likely to be males or non-breeding females;
- The conditions encountered within the survey buildings were not considered suitable to offer either significant maternity or hibernation potential for bats;
- Evidence of nesting bird use of the building was observed during the surveys, whereby a number of pigeons were identified within the buildings, particularly within Shed 3. All building / demolition works should subsequently, wherever possible, be completed outside of the bird nesting season (March to August inclusive) to minimise the impact on nesting birds. Where works are scheduled within the nesting bird season, these must be preceded by a site visit by a suitably qualified ecologist in order to determine whether the building is being actively used by nesting birds. No works will be permitted to commence until any identified any active nests become vacant;
- If careful consideration is made to incorporate improved roosting conditions into the proposals, the project could offer ecological gain for resident bats which have been identified to be utilising the survey building. New roost creation will subsequently be required to accommodate crevice-dwelling species of bats. The incorporation of new roosting facilities (bat tubes and/or boxes for crevice-dwelling bats & bird boxes for nesting birds etc.) will offer a Net Benefit for Biodiversity for bats and nesting birds in the local vicinity. As such, the recommendation is made that the creation of new roosting features are incorporated into the proposals. The installation of these features can be achieved at very little expense and with limited impact to the schedule of works;
- If planning is approved, the developer must apply for an EPSL to commence with the works. This typically takes approximately 30 working days to be issued. This licence would have to offer a methodology to ensure that any roosting sites are maintained or replaced and preferably enhanced in the new build, and the project undertaken in a way which minimises any risk to bats. An ecological clerk of works will be appointed and retained for the duration of the project;
- A detailed external lighting plan will be required to minimise any external light disturbance to the bats using the building and surrounding area.

To conclude, the survey buildings (notably Shed 4) are a **confirmed summer non-breeding day roost for soprano pipistrelle and common pipistrelle**, based upon the evidence gathered during the PRA, roost characterisation surveys and data obtained from static monitors within the survey building.

Subsequently, a detailed mitigation strategy will be required to ensure the proposals have minimal impact on bats which utilise the building, and generate a Net Benefit for Biodiversity at the site.

Furthermore, **a European Protected Species Licence (EPSL) will be required**, including a mitigation strategy approved by NRW, prior to commencement of the works.

7.2 Potential Impact of Proposals

The proposed works will likely directly impact upon the confirmed bat roost within Shed 4, and these potential impacts include: -

- Destruction of a summer non-breeding soprano pipistrelle and common pipistrelle day roost;
- Roost obstruction and possible entrapment with injury and death through the closure of bat access/egress points to interior PRFs;

- Noise and vibration disturbance during the renovation / conversion works.

It is not feasible to avoid the above impacts to bats by modifying the programme of works. As such, in order to proceed with the development proposals, a bat mitigation licence must be granted by Natural Resources Wales (NRW) prior to the commencement of any impactful works.

The implementation of an appropriate bat mitigation and compensation strategy is thought to be sufficient to ensure that the impacts to bats as a result of the proposals are minimised, and that the favourable conservation status of the species of concern is maintained.

The mitigation strategy will pose constraints upon the proposals, which will likely include timing constraints upon the commencement of works, restrictions upon the use of certain building materials and provision of compensatory roost features to ensure that roosting opportunity for bats is not minimised as a result of the proposals.

7.3 Mitigation Strategy

The results of the surveys have identified that crevice-dwellers (common and soprano pipistrelle) are utilising the building as a summer non-breeding day roost.

As such, the following sections outline the mitigation recommendations made to minimise the impact of the proposals on protected species which are utilising the survey building, and to improve the conservation status of the site for both bats and nesting birds. The recommendation is subsequently made that these mitigation methods are adopted within a European Protected Species Licence (EPSL) application which will be required prior to the commencement of the proposals.

7.3.1 Mitigation Strategy Details

The following section recommends mitigation in order to maintain and enhance the site's potential to support both crevice and void-dwelling bats along with nesting birds.

In order to comply with both Chapter 6 of Planning Policy Wales and the Environment Act (Wales) 2016, a Net Benefit for Biodiversity will be required as part of the development proposals. This will consist of: -

- 4 no. Schwegler 1FF Bat Boxes to be installed on retained trees on site;
- 4 no. Nestbox Company Large Bird Nest Box to be installed on retained trees on site;
- 4 no. Schwegler 1B Nest Box to be installed on retained trees on site.

If any of the above products / enhancements are not available, then further advice must be sought from a suitably qualified ecologist regarding a suitable replacement product / proposal.

Crevice-dweller Mitigation

Additional new roosting for bats will be created by fitting 4 no. Schwegler 1FF Bat Boxes on trees to be retained as part of the proposals.

These are to be fitted as high as possible on a suitable tree, and care must be taken to leave the access/egress slot at the bottom exposed for access. Where practical, all bat features should be located far enough from any windows to avoid any direct light spill, at least a minimum of 2 metres away.

The installation will be dependent on permissions from the LPA and must be undertaken by a licenced ecologist.

The above methods are relatively unintuitive in nature, and are an effective way at improving the site's long-term potential to support crevice-dwelling bats.



It is important to ensure that there is to be no direct illumination of any roost exit points. Any external lighting will be controlled by passive infrared.

The installation of bat mitigation features is to be undertaken under supervision by a suitably qualified ecologist.

Nesting Bird Mitigation

4 no. Nestbox Company Large Nestbox (or similar) and 4 no. Schwegler 1B Nest Boxes are to be installed in retained trees to the north east of the survey buildings.

Any nesting bird mitigation will not be suited on the south elevation as this may experience excess heat from the sun.

Direct and prolonged illumination of the buildings, especially near any roost entry points or bird boxes must be avoided as this will cause disturbance.

On occasions the suggested mitigation can be in short supply. Mitigation should subsequently be ordered as soon as is practicable in order to avoid potential supply issues during the construction phase.

If supply is depleted, advice should be sought from a suitably qualified ecologist on a suitable replacement prior to the purchase.

7.3.2 Mitigation Location Details

The proposed mitigation should be installed on mature trees to be retained on site.

These are situated to the north-east of the survey buildings, and the location and images of the trees are visible in Figures 24 & 25 below: -

Figure 24 – Location of Trees on Site, Highlighted in Green



Figure 25 – Photograph of Trees on which Mitigation is to be Affixed



7.3.3 Lighting

The potential impacts of lighting during and post-development on bats must be considered. The lighting of all areas of the site both during and post-development must be designed to avoid any impacts on bats.

Light spill onto sensitive areas which have the potential to be used by commuting and foraging bats should be limited to levels of 1 lux or less where possible, with no directed light onto hedges or trees, or enhancement roost features.

Suggestions for achieving this and for mitigating the lighting impact on bats are outlined in the best practice guidance developed by the Institute of Lighting Professionals (ILP) document 'Bats and Artificial Lighting at Night' (Guidance Note GN08/23) (2018) which was chaired by the Bat Conservation Trust Bats (BCT).and Lighting in the UK (BCT, 2007). These include: -

- Using low or high pressure sodium lights instead of mercury or metal halide lamps;
- Directing lighting to where needed and avoiding spillage, and design luminaires appropriately using hoods, cowls, shields etc. to avoid spillage;
- Any proposed roadways, footways and car parks should where possible be lit using bollards to keep the light below head height (~1.5m);
- Using lighting modelling programs to indicate where the light spill will occur if appropriate;
- Using the minimal level of lighting required to comply with guidance such as Institute of Lighting Engineers Guidance Notes for the Reduction of Obtrusive Light (2005);
- Using movement sensors or timers on security lighting;
- Not using a lamp greater than 150W for security lighting.

Any lights associated with on-site buildings must be angled or screened to minimise light spill up onto the soffits/eaves, and on any newly installed roost openings.

Lighting considerations should also be included within the EPSL application, prior to commencement of the proposals.

7.4 Recommendations

A European Protected Species Licence (EPSL) will be required from NRW to proceed with the works.

This will be accompanied by a dedicated **bat mitigation and compensation strategy (as informed by this report)**, which will be appropriate to the scale and scope of the proposed development works.

8.0 REFERENCES

CIEEM (2017) *Guidelines on Ecological Report Writing, Second Edition*. Chartered Institute of Ecology and Environmental Management, Winchester.

Collins, J. (2024) *Bat Surveys for Professional Ecologists: Good Practice Guidelines (4th edition)*. The Bat Conservation Trust, London.

DEFRA Magic Mapping Resource (2025) Biodiversity Information. *magic.defra.gov.uk*. Available: <https://magic.defra.gov.uk/magicmap.aspx>

HM Government (2010) Wildlife and Countryside Act 1981. HM Government.

Mitchell-Jones, A.J, & McLeish, A.P. Ed., (2004), 3rd Edition Bat Workers' Manual, JNCC.

Welsh Government & Natural Resources Wales, DataMapWales (2025) Biodiversity Information. *datamapwales.gov.wales*. Available: <https://datamap.gov.wales/>

APPENDIX A

Drawings



Notes:		A3
Survey Building		
Job: Associated British Ports, Middle Quay, Newport - Preliminary Roost Assessment and Activity Survey for Bats		
Title: Survey Building Location		
Date: August 2025		
Scale: NTS		
Drawn by: SO		
Checked by: EP		
ExCAL House, Capel Hendre Ind. Est. Ammanford Carmarthenshire SA18 3SJ Tel: 01269 831606 Fax: 01269 841867 Website: www.excaluk.com E-mail: info@excaluk.com		
Drawing No: 238-03-18.D01		
Revision No:	Date: 26/08/25	



Notes:

A3

Survey Building

Key	Bat Identified	Time	Comments
—	BAT 01 - C. Pip	21:46	Foraging along front of Shed 4
—	BAT 02 - C. Pip	21:51	EMERGED from broken window on (NE) Wall
—	BAT 03 - C. Pip	22:11	Commuted from (SE) to (NW) in front of Shed 4
—	BAT 04 - S. Pip	22:12	Heard not seen
—	BAT 05 - C. Pip	22:24	Commuted from woodland at (E) over Shed 3
—	BAT 06 - N. Lei	22:26	Heard not seen
—	BAT 07 - N. Noc	22:33	Heard not seen
—	BAT 08 - C. Pip	22:36	Heard not seen
—	BAT 09 - C. Pip	22:42	Foraging in circles above Shed 3
—	BAT 10 - S. Pip	22:45	Observed flying within Shed 4
—	BAT 11 - S. Pip	22:50	EMERGED from broken window on (NE) Wall
—	BAT 12 - C. Pip	22:57	Foraging around buddleia at front of Shed 3
—	BAT 13 - C. Pip	23:00	EMERGED from broken window on (NE) Wall
—	BAT 14 - N. Noc	23:00	Heard not seen
—	BAT 15 - N. Noc	23:01	Commuted over Shed 3
—	BAT 16 - 2x C. Pip	23:02	Foraging in circles above Shed 3

Job:

Associated British Ports, Middle Quay, Newport - Preliminary Roost Assessment and Activity Survey for Bats

Title:

Dusk Emergence Survey Results - 29th July 2025

Date: August 2025

Scale: NTS

Drawn by: SO

Checked by: EP



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Drawing No: 238-03-18.D02

Revision No:

Date: 26/08/25



Notes:

A3

Survey Building

Key	Bat Identified	Time	Comments
—	BAT 01 - C. Pip	19:36	Commuting from (NE) to (SW) above Shed 4
—	BAT 02 - N. Noc	19:42	Heard not seen
—	BAT 03 - C. Pip	19:50	Commuting from (SW) to (NE) above Shed 3 / Stores
—	BAT 04 - S. Pip	19:55	Heard not seen
—	BAT 05 - C. Pip	20:02	EMERGED from broken window on (NE) wall
—	BAT 06 - C. Pip	20:03 20:07	Foraging along (N) side of Shed 3 & Shed 4
—	BAT 07 - N. Noc	20:06	Heard not seen
—	BAT 08 - S. Pip	20:15	Heard not seen
—	BAT 09 - S. Pip	20:16	EMERGED from broken window on (NE) wall
—	BAT 10 - N. Noc	20:22	Commuting from (SW) to (NE) above Shed 4
—	BAT 11 - C. Pip	20:28	Heard not seen
—	BAT 12 - C. Pip	20:32 20:39	Foraging around buddleia at front of Shed 3
—	BAT 13 - S. Pip	20:55	Commuting from (NE) to (SW) above Shed 3
—	BAT 14 - C. Pip	20:56	EMERGED from broken skylight of Shed 4
—	BAT 15 - N. Noc	21:04	Heard not seen
—	BAT 16 - C. Pip	21:12	Commuting from (E) to (W) at (S) of Shed 3
—	BAT 17 - C. Pip	21:19	Foraging along (N) side of Shed 3 & Shed 4

Job:

Associated British Ports, Middle Quay, Newport - Preliminary Roost Assessment and Activity Survey for Bats

Title:

Dusk Emergence Survey Results - 17th September 2025

Date:

September 2025

Scale:

NTS

Drawn by:

SO

Checked by:

EP

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Drawing No:

238-03-18.D03

Revision No:

Date:

18/09/25

APPENDIX B

Citations of Designated Sites

**CYNGOR CEFN GWLAD CYMRU
COUNTRYSIDE COUNCIL FOR WALES**

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

MONMOUTHSHIRE/NEWPORT

**RIVER USK (LOWER USK)/
AFON WYSG (WYSG ISAF)**

Date of Notification: 1996

National Grid References: SN 239239- ST317837

O.S. Maps:

1:50000 Sheet Numbers:	160, 161, 171
1:10000 Sheet Numbers:	ST 38 SW, ST 30 SW ST 38 NW, ST 30 SE ST 39 SW, ST 30 NE ST 39 SE, ST 30 NW ST 39 NE, SO 31 SW SO 21 SE

Site Area: 543.9 ha

Description:

River Usk

The River Usk comprises a large, linear ecosystem which acts as an important wildlife corridor, an essential migration route and key breeding area for many nationally and internationally important species. The Usk is of special interest as a fine example of a river running over sandstones and for its associated plant and animal communities. Its character spans a wide range of types from an upland, base-poor stream to a large lowland river with extensive tidal reaches. Its overall diversity is a product of its underlying geology, soil type, adjacent land-use and fluvio-geomorphological regime.

The River Usk is one of the largest rivers in Wales. From its source to its confluence, the main channel is over 120 kilometres long, and drains a catchment of 1358 km². Rising at an altitude of 500 metres on Mynydd Ddu on the Carmarthenshire/Powys border, the Usk flows eastwards along the northern scarp of the Brecon Beacons, turning south below Abergavenny and meandering down through Monmouthshire to its confluence with the Severn Estuary below Newport.

River Usk (Lower Usk) (Abergavenny - Newport)

The River Usk (Lower Usk) is a rare example of a large mesotrophic lowland river which has not been subject to significant modification by man. Of particular significance to the river's morphology and biology are the extensive deposits of fluvio-glacial and alluvial material in the Usk valley between Abergavenny and Newport. The Lower Usk has developed a wide floodplain with a complex and active system of meanders, cut-off and back channels which

contribute to the biological interest and diversity of the site.

The main plant communities present are those that are characteristic of rivers running over hard and soft sandstones with changing base status merging into brackish waters in its lowest reaches.

The river shows a clear downstream succession in plant communities due in part to the rapid transition from mesotrophic to nutrient rich in its lower reaches and increasing salinity as it nears its confluence with the Severn Estuary.

The invertebrate fauna is characteristic of a large lowland river. Of special interest are the crane flies associated with silty river margins in the vicinity of Newbridge on Usk. The fish fauna is of international significance including several rare and scarce species and there is an expanding population of otters *Lutra lutra*. Several scarce higher plant species occurring along the river's tidal reaches are also of special interest.

Whilst not a special feature of the site, there is a good range of breeding birds associated with riverine habitats.

The SSSI incorporates adjacent areas of riparian habitat which directly support the special interest of the river. These include woodlands dominated by alder *Alnus glutinosa* and willows *Salix spp.*, marshy grassland, stands of tall herb, swamp and fen vegetation, salt-marsh and coastal grassland.

Geology and Topography

The catchment of the Lower Usk is predominantly low lying, the eastern part of the Brecon Beacons and South Wales Coalfield Massif being the most significant upland areas within it. The River Usk (Lower Usk) is thus lowland in character, meandering across a floodplain up to 3 km across and falling from 100m AOD at Abergavenny to sea level over a distance of 68 km.

Between Abergavenny and Llanfair Kilgeddin, the river flows over the marls, mudstones and sandstones of the Raglan and St Maughan's beds of the Lower Old Red Sandstone Series. The river bed of the Lower Usk is however, also strongly influenced by the extensive fluvio-glacial and alluvial deposits between Abergavenny and Usk. At Llanfair Kilgeddin the river initially follows the line of the Pontypool Road Fault separating the Lower Old Red Sandstone rocks in the north-west from the older limestones and mudstones of the Ludlow (Silurian) series in the south. As the river crosses onto the more resistant Silurian Ludlow Series it has cut down to the bedrock in a number of places creating a rock based channel that is in marked contrast to the silt and gravel based channel upstream.

Above Usk, the valley narrows cutting through the resistant limestones and marls of the Ludlow Series to form the Llanbadoc Gap. Below this point the river again flows over the marls, mudstones and sandstones of the Raglan and St Maughan's beds until it crosses onto the Triassic Keuper Marls at Newport Docks. The great depth of alluvial and glacial deposits within the valley from Llanbadoc Gap to the River's confluence with the Severn Estuary means that the underlying geology has little direct influence on the river.

The Lower Usk has a relatively natural fluvio-geomorphic regime and has remained relatively free from straightening, widening or deepening schemes. The section of the river between Caerleon and Usk is particularly active with migrating meanders depositing shingle point bars and islands and cutting vertical earth cliffs. The pattern of meander loops along the entire length of the river from Abergavenny to Newport is complex, steep outer slopes contrasting with shallow slip-off slopes. Large abandoned meander loops such as the one at Llanfihangel Gobion indicate the former course of the River Usk as it flowed across and created its floodplain. Oxbow lakes and active back channels remain adjacent to the river in places.

Flora

In its middle and upper reaches the river channel is characterized by the frequent occurrence of floating and submerged plants including water crowfoot and water milfoils *Myriophyllum spp.* Aquatic macrophytes disappear below the tidal limit at Newbridge on Usk although emergent species are able to tolerate the transition zone between brackish and freshwater conditions.

Riverside rocks and boulders are characterised by a flora of mosses, such as *Amblystegium fluviatile*, *Cinclidotus fontinalioides*, *Fontinalis antipyretica*, *Rhynchostegium riparioides* and *Thamnobryum alopecurum*, liverworts, such as *Chiloscyphus polyanthus*, *Conocephalum conicum*, and *Marchantia polymorpha*, the filamentous alga *Lemanea fluviatilis* and lichens of the genera *Verrucaria*.

Marginal vegetation is dominated variously by reed canary-grass *Phalaris arundinacea*, branched bur reed *Sparganium erectum*, common spike-rush *Eleocharis palustris* and lesser pond-sedge *Carex acutiformis* with a variety of other species including brooklime *Veronica beccabunga*, water forget-me-not *Myosotis scorpioides*, water mint *Mentha aquatica* and yellow cress *Rorippa spp.* Below Newbridge the upper mud banks of the river are colonized by saltmarsh species such as sea aster *Aster tripolium*, saltmarsh-grass *Puccinellia spp.* and scurvygrass *Cochlearia spp.*

Characteristic riverbank plants include stinging nettle *Urtica dioica*, great willowherb *Epilobium hirsutum* and Indian balsam *Impatiens glandulifera*. Locally the river bank vegetation can be more diverse and supports species such as common knapweed *Centaurea nigra*, Meadowsweet *Filipendula ulmaria* and comfrey *Symphytum spp.*. Occasionally inundated grassland along the tidal reaches is dominated by couch grass *Elytrigia repens* and supports regionally rare species including bulbous foxtail *Alopecurus bulbosus*, marsh-mallow *Althaea officinalis* and marsh helleborine *Epipactis palustris*.

The river banks are frequently lined with willows and alder. In addition, there are larger areas of woodland adjacent to the river dominated by these species or by sycamore *Acer pseudoplatanus*, pedunculate oak *Quercus robur* and ash *Fraxinus excelsior*.

The River Usk (Lower Usk) floodplain retains a number of important geomorphological features and associated wetland habitats. In particular at Llanvihangel Gobion, south of Abergavenny, a large cut off meander has areas of standing water, emergent and marshy vegetation and shingle. The areas of standing water support diverse still water plant communities dominated by Canadian waterweed *Elodea canadensis* with frequent broad-leaved pondweed *Potamogeton natans*, sweet-grasses *Glyceria spp.*, fool's water-cress *Apium nodiflorum*, pink water-speedwell

Veronica catenata and common water-plantain *Alisma plantago aquatica*, together with by stands of common spike-rush, rushes *Juncus spp.* and lesser spearwort *Ranunculus flammula*.

Mammals

The common otter *Lutra lutra* is widespread along the length of the river where appropriate bankside cover exists. The frequent tree cover provides valuable feeding and roosting habitats for several bat species including Daubenton's bat *Myotis daubentonii*.

Birds

The River Usk (Lower Usk) supports a wide range of riverside breeding birds such as sand martin *Riparia riparia* and kingfisher *Alcedo atthis* nesting in eroding earth cliffs. Yellow wagtail *Motacilla flava*, grey wagtail *M. cinerea* and dipper *Cinclus cinclus* occur with increasing frequency above the tidal limit at Newbridge. In addition marsh warbler *Acrocephalus palustris* breeds in riparian habitat along the river banks. The cut-off meander at Llanfihangel Gobion is an important area for wintering and passage migrants including teal *Anas crecca*, greenshank *Tringa nebularia* and green sandpiper *Tringa ochropus*.

Fish

The river has a wide range of migratory and non-migratory fish species. The most abundant coarse fish include chub *Leuciscus cephalus*, roach *Rutilus rutilus* and dace *Leuciscus leuciscus* which, together with the bullhead, are the most widely distributed fish along the river.

The rare river lamprey *Lampetra fluviatilis* and twaite shad *Alosa fallax* and the very rare allis shad *Alosa alosa* all migrate from the Severn Estuary and spawn at various localities in the river. Large numbers of elvers *Anguilla anguilla* migrate up the river with spring tides.

The Usk is a notable game fish river with species including brown trout *Salmo trutta fario*, sea trout *Salmo trutta trutta* and Atlantic salmon *Salmo salar*, the latter migrating up along the lower river, in order to reach spawning grounds in the headwaters and tributaries of the River Usk (Upper Usk). The river also supports an important population of the non-migratory brook lamprey *Lampetra planeri*.

Invertebrates

The lower Usk has important assemblages of craneflies including rare and scarce species such as *Limonia omissinervis*, *Erioptera limbata* and *Rhabdomastix hilaris*, *Gonomyia abbreviata* and *Cheilotrichia imbuta*. The rare mayfly *Potamanthus luteus* can be found in the river and there are also localised populations of the Atlantic stream crayfish *Austropotamobius pallipes*, an endangered species in Europe.

Remarks:

The site supports the following habitats and species covered by the EC Directive 92/43/EEC on the conservation of natural habitats and of wild flora and fauna:

Common otter *Lutra lutra* - Annex II and IV
Allis shad *Alosa alosa* - Annex II and V
Twaite shad *Alosa fallax* - Annex II and V
Brook lamprey *Lampetra planeri* - Annex II
River lamprey *Lampetra fluviatilis* - Annex II and V
Bullhead *Cottus gobio* - Annex II
Atlantic salmon *Salmo salar* - Annex II and V
Atlantic stream crayfish *Austropotamobius pallipes* - Annex II and V

Otter and Atlantic stream crayfish are also listed in schedule 5 of the Wildlife and Countryside Act 1981, as amended.

*This document is **NOT** a definitive legal version and has been formatted, updated and partially edited for use on the CCW Web site. This document should not be used in any legal proceedings, public enquiry or any other hearing or appeal. If you require a full legal copy of the document please contact CCW in writing.*

STANDARD DATA FORM for sites within the 'UK national site network of European sites'

Special Protection Areas (SPAs) are classified and Special Areas of Conservation (SACs) are designated under:

- the Conservation of Habitats and Species Regulations 2017 (as amended) in England and Wales (including the adjacent territorial sea) and to a limited extent in Scotland (reserved matters) and Northern Ireland (excepted matters);
- the Conservation (Natural Habitats &c.) Regulations 1994 (as amended) in Scotland;
- the Conservation (Natural Habitats, &c) Regulations (Northern Ireland) 1995 (as amended) in Northern Ireland; and
- the Conservation of Offshore Marine Habitats and Species Regulations 2017 (as amended) in the UK offshore area.

Each SAC or SPA (forming part of the UK national site network of European sites) has its own Standard Data Form containing site-specific information. The information provided here generally follows the same documenting format for SACs and SPAs, as set out in the [Official Journal of the European Union recording the Commission Implementing Decision of 11 July 2011 \(2011/484/EU\)](#).

Please note that these forms contain a number of codes, all of which are explained either within the data forms themselves or in the end notes.

More general information on SPAs and SACs in the UK is available from the [SPA homepage](#) and [SAC homepage](#) on the JNCC website. These webpages also provide links to Standard Data Forms for all SAC and SPA sites in the UK.

<https://jncc.gov.uk/>



NATURA 2000 - STANDARD DATA FORM

For Special Protection Areas (SPA),
Proposed Sites for Community Importance (pSCI),
Sites of Community Importance (SCI) and
for Special Areas of Conservation (SAC)

SITE UK0013007
SITENAME River Usk/ Afon Wysg

TABLE OF CONTENTS

- [1. SITE IDENTIFICATION](#)
- [2. SITE LOCATION](#)
- [3. ECOLOGICAL INFORMATION](#)
- [4. SITE DESCRIPTION](#)
- [5. SITE PROTECTION STATUS AND RELATION WITH CORINE BIOTOPES](#)
- [6. SITE MANAGEMENT](#)

1. SITE IDENTIFICATION

1.1 Type B	1.2 Site code UK0013007	Back to top
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1.3 Site name

River Usk/ Afon Wysg

1.4 First Compilation date 1998-03	1.5 Update date 2015-12
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1.6 Respondent:

Name/Organisation: Joint Nature Conservation Committee
Address: Joint Nature Conservation Committee Monkstone House City Road Peterborough PE1 1JY
Email:

Date site proposed as SCI:	1998-03
Date site confirmed as SCI:	2004-12
Date site designated as SAC:	2004-12
National legal reference of SAC designation:	Regulations 11 and 13-15 of the Conservation of Habitats and Species Regulations 2010 (http://www.legislation.gov.uk/uksi/2010/490/contents/made).

2. SITE LOCATION

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2.1 Site-centre location [decimal degrees]:

-3.013888889

51.79583333

967.97

0.0

0.0

2.5 Administrative region code and name

UKL2	East Wales
UKL1	West Wales and The Valleys

2.6 Biogeographical Region(s)

Atlantic (100.0%)

3. ECOLOGICAL INFORMATION

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3.1 Habitat types present on the site and assessment for them

Annex I Habitat types						Site assessment			
Code	PF	NP	Cover [ha]	Cave [number]	Data quality	A B C D	A B C		
						Representativity	Relative Surface	Conservation	Global
1130 0			134.55	0	G	D			
1140 0			123.9	0	G	D			
1330 0			29.04	0	M	D			
3260 0			29.04	0	M	B	C	B	C
9130 0			4.84	0	G	D			
9180 0	X		21.3	0	G	D			
91A0 0			12.58	0	G	D			
91D0 0	X		2.9	0	G	D			

91E0 B	X		43.56	0	G	D				
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- **PF:** for the habitat types that can have a non-priority as well as a priority form (6210, 7130, 9430) enter "X" in the column PF to indicate the priority form.
- **NP:** in case that a habitat type no longer exists in the site enter: x (optional)
- **Cover:** decimal values can be entered
- **Caves:** for habitat types 8310, 8330 (caves) enter the number of caves if estimated surface is not available.
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation)

3.2 Species referred to in Article 4 of Directive 2009/147/EC and listed in Annex II of Directive 92/43/EEC and site evaluation for them

Species					Population in the site						Site assessment			
G	Code	Scientific Name	S	NP	T	Size		Unit	Cat.	D.qual.	A B C D	A B C		
						Min	Max				Pop.	Con.	Iso.	Gl
F	1102	Alosa alosa			p				P	DD	C	C	C	C
F	1103	Alosa fallax			p				P	DD	A	B	C	A
I	1092	Austropotamobius pallipes			p				P	DD	D			
F	1163	Cottus gobio			p				P	DD	B	B	C	B
F	1099	Lampetra fluviatilis			p				P	DD	B	A	C	A
F	1096	Lampetra planeri			p				P	DD	B	B	C	A
M	1355	Lutra lutra			p	11	50	i		M	C	B	C	B
I	1029	Margaritifera margaritifera			p				P	DD	D			
F	1095	Petromyzon marinus			p				P	DD	B	B	C	B
M	1303	Rhinolophus hipposideros			p				P	DD	D			
F	1106	Salmo salar			p				P	DD	A	C	C	A

- **Group:** A = Amphibians, B = Birds, F = Fish, I = Invertebrates, M = Mammals, P = Plants, R = Reptiles
- **S:** in case that the data on species are sensitive and therefore have to be blocked for any public access enter: yes
- **NP:** in case that a species is no longer present in the site enter: x (optional)
- **Type:** p = permanent, r = reproducing, c = concentration, w = wintering (for plant and non-migratory species use permanent)
- **Unit:** i = individuals, p = pairs or other units according to the Standard list of population units and codes in accordance with Article 12 and 17 reporting (see [reference portal](#))
- **Abundance categories (Cat.):** C = common, R = rare, V = very rare, P = present - to fill if data are deficient (DD) or in addition to population size information
- **Data quality:** G = 'Good' (e.g. based on surveys); M = 'Moderate' (e.g. based on partial data with some extrapolation); P = 'Poor' (e.g. rough estimation); VP = 'Very poor' (use this category only, if not even a rough estimation of the population size can be made, in this case the fields for population size can remain empty, but the field "Abundance categories" has to be filled in)

4. SITE DESCRIPTION

4.1 General site character

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Habitat class	% Cover
N03	4.5
N07	3.8
N14	2.0
N16	10.1
N02	26.8
N08	3.4
N23	2.1
N06	37.9
N09	8.0
N10	1.4
Total Habitat Cover	99.99999999999999

Other Site Characteristics

1 Terrestrial: Soil &
 Geology: alluvium,mud,nutrient-rich,limestone,basic,neutral,shingle,sandstone,acidic,peat,clay,nutrient-poor,sea
 Terrestrial: Geomorphology and landscape: valley,floodplain,coastal,lowland,upland,island 3 Marine:
 Geology: mud 4 Marine: Geomorphology: estuary

4.2 Quality and importance

Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation for which the area is considered to support a significant presence. Petromyzon marinus for which this is considered to be one of the best areas in the United Kingdom. Lampetra fluviatilis for which this is considered to be one of the best areas in the United Kingdom. Lampetra planeri for which this is considered to be one of the best areas in the United Kingdom. Alosa alosa for which the area is considered to support a significant presence. Alosa fallax for which this is considered to be one of the best areas in the United Kingdom. Salmo salar for which this is considered to be one of the best areas in the United Kingdom. Cottus gobio for which this is considered to be one of the best areas in the United Kingdom. Lutra lutra for which this is considered to be one of the best areas in the United Kingdom.

4.3 Threats, pressures and activities with impacts on the site

The most important impacts and activities with high effect on the site

Negative Impacts			
Rank	Threats and pressures [code]	Pollution (optional) [code]	inside/outside [i o b]
M	I01		B
H	A04		I
L	B07		B
H	H01		B
L	H05		O
H	J02		I
M	B02		B
M	J03		I

Positive Impacts			
Rank	Activities, management [code]	Pollution (optional) [code]	inside/outside [i o b]
M	J03		I

Rank: H = high, M = medium, L = low

Pollution: N = Nitrogen input, P = Phosphor/Phosphate input, A = Acid input/acidification,

T = toxic inorganic chemicals, O = toxic organic chemicals, X = Mixed pollutions

i = inside, o = outside, b = both

4.5 Documentation

The Natural Resources Wales weblink below provides access to information on its designated sites. Detailed information about this Natura 2000 site can be accessed via the Management Plan link provided in Section 6.2. See also the 'UK Approach' document for more information (link via the JNCC website).

Link(s): <https://naturalresources.wales/guidance-and-advice/environmental-topics/wildlife-and-biodiversity/protected-areas-of-land>
http://jncc.defra.gov.uk/pdf/Natura2000_StandardDataForm_UKApproach_Dec2015.pdf

5. SITE PROTECTION STATUS (optional)

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5.1 Designation types at national and regional level:

Code	Cover [%]	Code	Cover [%]	Code	Cover [%]
UK04	100.0				

6. SITE MANAGEMENT

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6.1 Body(ies) responsible for the site management:

Organisation:	Natural Resources Wales
Address:	
Email:	

6.2 Management Plan(s):

An actual management plan does exist:

☒ Yes	Name: RIVER USK / AFON WYSG Link: https://www.naturalresources.wales/media/673384/River_Usk%20SAC%20core%20plan.pdf
☐ No, but in preparation	
☐ No	

EXPLANATION OF CODES USED IN THE SPECIAL AREA OF CONSERVATION (SAC) AND SPECIAL PROTECTION AREA (SPA) STANDARD DATA FORMS

The codes in the table below generally follow those explained in the [official European Union guidelines for the Standard Data Form](#) (also referencing the relevant page number).

1.1 Site type

CODE	DESCRIPTION	PAGE NO
A	SPA (classified Special Protection Area)	53
B	cSAC, SCI or SAC (candidate Special Area of Conservation, Site of Community Importance, designated Special Area of Conservation)	53
C	SPA area/boundary is the same as the cSAC/SCI/SAC i.e. a co-classified/designated site (Note: this situation only occurs in Gibraltar)	53

3.1 Habitat code

CODE	DESCRIPTION	PAGE NO
1110	Sandbanks which are slightly covered by sea water all the time	57
1130	Estuaries	57
1140	Mudflats and sandflats not covered by seawater at low tide	57
1150	Coastal lagoons	57
1160	Large shallow inlets and bays	57
1170	Reefs	57
1180	Submarine structures made by leaking gases	57
1210	Annual vegetation of drift lines	57
1220	Perennial vegetation of stony banks	57
1230	Vegetated sea cliffs of the Atlantic and Baltic Coasts	57
1310	Salicornia and other annuals colonizing mud and sand	57
1320	Spartina swards (Spartinion maritimae)	57
1330	Atlantic salt meadows (Glaucio-Puccinellietalia maritimae)	57
1340	Inland salt meadows	57
1420	Mediterranean and thermo-Atlantic halophilous scrubs (Sarcocornetea fruticosi)	57
2110	Embryonic shifting dunes	57
2120	Shifting dunes along the shoreline with Ammophila arenaria ("white dunes")	57
2130	Fixed coastal dunes with herbaceous vegetation ("grey dunes")	57
2140	Decalcified fixed dunes with Empetrum nigrum	57
2150	Atlantic decalcified fixed dunes (Calluno-Ulicetea)	57
2160	Dunes with Hippophya• rhamnoides	57
2170	Dunes with Salix repens ssp. argentea (Salicion arenariae)	57
2190	Humid dune slacks	57
21A0	Machairs (* in Ireland)	57
2250	Coastal dunes with Juniperus spp.	57
2330	Inland dunes with open Corynephorus and Agrostis grasslands	57
3110	Oligotrophic waters containing very few minerals of sandy plains (Littorelletalia uniflorae)	57
3130	Oligotrophic to mesotrophic standing waters with vegetation of the Littorelletea uniflorae and/or of the Isoëto-Nanojuncetea	57
3140	Hard oligo-mesotrophic waters with benthic vegetation of Chara spp.	57
3150	Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation	57

CODE	DESCRIPTION	PAGE NO
3160	Natural dystrophic lakes and ponds	57
3170	Mediterranean temporary ponds	57
3180	Turloughs	57
3260	Water courses of plain to montane levels with the Ranunculion fluitantis and Callitriche-Batrachion vegetation	57
4010	Northern Atlantic wet heaths with Erica tetralix	57
4020	Temperate Atlantic wet heaths with Erica ciliaris and Erica tetralix	57
4030	European dry heaths	57
4040	Dry Atlantic coastal heaths with Erica vagans	57
4060	Alpine and Boreal heaths	57
4080	Sub-Arctic Salix spp. scrub	57
5110	Stable xerothermophilous formations with Buxus sempervirens on rock slopes (Berberidion p.p.)	57
5130	Juniperus communis formations on heaths or calcareous grasslands	57
6130	Calaminarian grasslands of the Violetalia calaminariae	57
6150	Siliceous alpine and boreal grasslands	57
6170	Alpine and subalpine calcareous grasslands	57
6210	Semi-natural dry grasslands and scrubland facies on calcareous substrates (Festuco-Brometalia) (* important orchid sites)	57
6230	Species-rich Nardus grasslands, on silicious substrates in mountain areas (and submountain areas in Continental Europe)	57
6410	Molinia meadows on calcareous, peaty or clayey-silt-laden soils (Molinion caeruleae)	57
6430	Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels	57
6510	Lowland hay meadows (Alopecurus pratensis, Sanguisorba officinalis)	57
6520	Mountain hay meadows	57
7110	Active raised bogs	57
7120	Degraded raised bogs still capable of natural regeneration	57
7130	Blanket bogs (* if active bog)	57
7140	Transition mires and quaking bogs	57
7150	Depressions on peat substrates of the Rhynchosporion	57
7210	Calcareous fens with Cladium mariscus and species of the Caricion davallianae	57
7220	Petrifying springs with tufa formation (Cratoneurion)	57
7230	Alkaline fens	57
7240	Alpine pioneer formations of the Caricion bicoloris-atrofuscae	57
8110	Siliceous scree of the montane to snow levels (Androsacetalia alpinae and Galeopsietalia ladani)	57
8120	Calcareous and calcshist scree of the montane to alpine levels (Thlaspietalia rotundifoliae)	57
8210	Calcareous rocky slopes with chasmophytic vegetation	57
8220	Siliceous rocky slopes with chasmophytic vegetation	57
8240	Limestone pavements	57
8310	Caves not open to the public	57
8330	Submerged or partially submerged sea caves	57
9120	Atlantic acidophilous beech forests with Ilex and sometimes also Taxus in the shrublayer (Quercion robur-petraeae or Ilici-Fagenion)	57
9130	Asperulo-Fagetum beech forests	57
9160	Sub-Atlantic and medio-European oak or oak-hornbeam forests of the Carpinion betuli	57
9180	Tilio-Acerion forests of slopes, scree and ravines	57
9190	Old acidophilous oak woods with Quercus robur on sandy plains	57
91A0	Old sessile oak woods with Ilex and Blechnum in the British Isles	57
91C0	Caledonian forest	57
91D0	Bog woodland	57
91E0	Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae)	57
91J0	Taxus baccata woods of the British Isles	57

3.1 Habitat representativity (abbreviated to 'Representativity' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent representativity	57
B	Good representativity	57
C	Significant representativity	57
D	Non-significant presence representativity	57

3.1 Relative surface

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	58
B	> 2%-15%	58
C	≤ 2%	58

3.1 Degree of conservation (abbreviated to 'Conservation' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	59
B	Good conservation	59
C	Average or reduced conservation	59

3.1 Global assessment (abbreviated to 'Global' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	59
B	Good value	59
C	Significant value	59

3.2 Population (abbreviated to 'Pop.' in data form)

CODE	DESCRIPTION	PAGE NO
A	> 15%-100%	62
B	> 2%-15%	62
C	≤ 2%	62
D	Non-significant population	62

3.2 Degree of conservation (abbreviated to 'Con.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent conservation	63
B	Good conservation	63
C	Average or reduced conservation	63

3.2 Isolation (abbreviated to 'Iso.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Population (almost) Isolated	63
B	Population not-isolated, but on margins of area of distribution	63
C	Population not-isolated within extended distribution range	63

3.2 Global Grade (abbreviated to 'Glo.' or 'G.' in data form)

CODE	DESCRIPTION	PAGE NO
A	Excellent value	63
B	Good value	63
C	Significant value	63

3.3 Other species – essentially covers bird assemblage types

CODE	DESCRIPTION	PAGE NO
WATR	Non-breeding waterbird assemblage	UK specific code
SBA	Breeding seabird assemblage	UK specific code

BBA	Breeding bird assemblage (applies only to sites classified pre 2000)	UK specific code
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4.1 Habitat class code

CODE	DESCRIPTION	PAGE NO
N01	Marine areas, Sea inlets	65
N02	Tidal rivers, Estuaries, Mud flats, Sand flats, Lagoons (including saltwork basins)	65
N03	Salt marshes, Salt pastures, Salt steppes	65
N04	Coastal sand dunes, Sand beaches, Machair	65
N05	Shingle, Sea cliffs, Islets	65
N06	Inland water bodies (Standing water, Running water)	65
N07	Bogs, Marshes, Water fringed vegetation, Fens	65
N08	Heath, Scrub, Maquis and Garrigue, Phygrana	65
N09	Dry grassland, Steppes	65
N10	Humid grassland, Mesophile grassland	65
N11	Alpine and sub-Alpine grassland	65
N14	Improved grassland	65
N15	Other arable land	65
N16	Broad-leaved deciduous woodland	65
N17	Coniferous woodland	65
N19	Mixed woodland	65
N21	Non-forest areas cultivated with woody plants (including Orchards, groves, Vineyards, Dehesas)	65
N22	Inland rocks, Screes, Sands, Permanent Snow and ice	65
N23	Other land (including Towns, Villages, Roads, Waste places, Mines, Industrial sites)	65
N25	Grassland and scrub habitats (general)	65
N26	Woodland habitats (general)	65

4.3 Threats code

CODE	DESCRIPTION	PAGE NO
A01	Cultivation	65
A02	Modification of cultivation practices	65
A03	Mowing / cutting of grassland	65
A04	Grazing	65
A05	Livestock farming and animal breeding (without grazing)	65
A06	Annual and perennial non-timber crops	65
A07	Use of biocides, hormones and chemicals	65
A08	Fertilisation	65
A10	Restructuring agricultural land holding	65
A11	Agriculture activities not referred to above	65
B01	Forest planting on open ground	65
B02	Forest and Plantation management & use	65
B03	Forest exploitation without replanting or natural regrowth	65
B04	Use of biocides, hormones and chemicals (forestry)	65
B06	Grazing in forests/ woodland	65
B07	Forestry activities not referred to above	65
C01	Mining and quarrying	65
C02	Exploration and extraction of oil or gas	65
C03	Renewable abiotic energy use	65
D01	Roads, paths and railroads	65
D02	Utility and service lines	65
D03	Shipping lanes, ports, marine constructions	65
D04	Airports, flightpaths	65
D05	Improved access to site	65
E01	Urbanised areas, human habitation	65
E02	Industrial or commercial areas	65

CODE	DESCRIPTION	PAGE NO
E03	Discharges	65
E04	Structures, buildings in the landscape	65
E06	Other urbanisation, industrial and similar activities	65
F01	Marine and Freshwater Aquaculture	65
F02	Fishing and harvesting aquatic resources	65
F03	Hunting and collection of wild animals (terrestrial), including damage caused by game (excessive density), and taking/removal of terrestrial animals (including collection of insects, reptiles, amphibians, birds of prey, etc., trapping, poisoning, poaching, predator control, accidental capture (e.g. due to fishing gear), etc.)	65
F04	Taking / Removal of terrestrial plants, general	65
F05	Illegal taking/ removal of marine fauna	65
F06	Hunting, fishing or collecting activities not referred to above	65
G01	Outdoor sports and leisure activities, recreational activities	65
G02	Sport and leisure structures	65
G03	Interpretative centres	65
G04	Military use and civil unrest	65
G05	Other human intrusions and disturbances	65
H01	Pollution to surface waters (limnic & terrestrial, marine & brackish)	65
H02	Pollution to groundwater (point sources and diffuse sources)	65
H03	Marine water pollution	65
H04	Air pollution, air-borne pollutants	65
H05	Soil pollution and solid waste (excluding discharges)	65
H06	Excess energy	65
H07	Other forms of pollution	65
I01	Invasive non-native species	65
I02	Problematic native species	65
I03	Introduced genetic material, GMO	65
J01	Fire and fire suppression	65
J02	Human induced changes in hydraulic conditions	65
J03	Other ecosystem modifications	65
K01	Abiotic (slow) natural processes	65
K02	Biocenotic evolution, succession	65
K03	Interspecific faunal relations	65
K04	Interspecific floral relations	65
K05	Reduced fecundity/ genetic depression	65
L05	Collapse of terrain, landslide	65
L07	Storm, cyclone	65
L08	Inundation (natural processes)	65
L10	Other natural catastrophes	65
M01	Changes in abiotic conditions	65
M02	Changes in biotic conditions	65
U	Unknown threat or pressure	65
XO	Threats and pressures from outside the Member State	65

5.1 Designation type codes

CODE	DESCRIPTION	PAGE NO
UK00	No Protection Status	67
UK01	National Nature Reserve	67
UK04	Site of Special Scientific Interest (GB)	67
UK05	Marine Conservation Zone	67
UK06	Nature Conservation Marine Protected Area	67
UK86	Special Area (Channel Islands)	67
UK98	Area of Special Scientific Interest (NI)	67
IN00	Ramsar Convention site	67
IN08	Special Protection Area	67
IN09	Special Area of Conservation	67