

SHED 6 – ABP NEWPORT PRELIMINARY ROOST ASSESSMENT (PRA) & ACTIVITY SURVEYS FOR BATS



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Revision 1	July 2026	Updated report to include results of two Dusk Emergence Surveys undertaken in May and June 2026. The survey details are outlined in Section 6.0, whilst Section 7.0 provides a summary and mitigation recommendations. References have been moved to Section 8.0 of this report. The Executive Summary in 1.0 has been updated based upon the results of the Dusk Emergence Surveys.

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SHED 6 – ABP NEWPORT

PRELIMINARY ROOST ASSESSMENT (PRA) AND ACTIVITY SURVEYS FOR BATS

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1.0 EXECUTIVE SUMMARY

This report is a brief summary of findings and recommendations of the Preliminary Roost Assessment (PRA) for bats undertaken on behalf of Associated British Ports (hereafter referred to as the client / ABP) at warehouses located at Shed 6, East Way Road, Newport, NP20 2NQ. 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;
- A total of 7 records of statutory designated sites were returned within 1km of the proposed development site, with all records relating to the River Usk, Severn Estuary and Newport Wetlands. Details of statutory designated sites within 1km of the survey area are outlined below: -
 - o **Severn Estuary** – Special Protection Area (SPA), Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), RAMSAR;
 - o **River Usk (Lower Usk)** – Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI);
 - o **Newport Wetlands** – National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI).
- The desk study 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 Ebbw Site of Importance for Nature Conservation (SINC), with this being located approximately 1km to the west of the survey buildings. The second record meanwhile consists of an unnamed SINC located adjacent to the eastern side of the River Usk, approximately 800m to the north-east;
- Connectivity between the habitats identified to the south-east of the survey buildings and additional roosting and foraging habitat for bats elsewhere was generally concluded to be good, with vegetation pathways alongside the River Usk and nearby Ebbw River offering good commuting opportunity for a number of potential bat species;
- The PRA was undertaken on 24th March 2026;
- The survey consisted of the inspection of two buildings which are affixed to one another, namely Shed 6 and an associated lean-to which is affixed to the south-eastern wall of Shed 6;
- A brief summary of the survey buildings is provided below: -
 - o **Shed 6 (Transit Shed No 6)** – A brick and single-skin steel clad warehouse building with single-skinned corrugated steel roof. No 6 Transit Shed is approximately 185m x 30m in dimension;
 - o **Associated Lean-to** – A steel framed and skinned lean-to of approximate 200m x 14m dimension is affixed to the southern wall of Shed 6, and located between Shed 6 and Shed 7 situated to the south. The roof of Shed 6 consists of single-skinned corrugated steel sheeting, interlaced with translucent UPVC which serve as skylights.
- Potential access/egress points for bats to the building interiors were recorded during the survey. These include; open roller shutter doors / gaps around closed roller shutter doors, open north-eastern end of lean-to, small

damaged area to steel roof sheet of Shed 6 and the open plan nature of building interior which connects Shed 6 & the lean-to, all of which enable the potential free access/egress of bats to the respective building interiors in these locations;

- Potential Roosting Features (PRFs) across both Shed 6 and the lean-to, although present, are limited. PRFs situated across the survey buildings include; steel roof features and intersections between adjoining sections, cracks within intersections between steel framework of roof and brickwork walls of Shed 6, small cracks within exterior brickwork at (SW) and (NW) corners of Shed 6, lifting of external cladding at (SW) of Shed 6, gaps between cladding and brickwork of shared interior wall between Shed 6 and lean-to and the open and well-connected interior of Shed 6 and lean-to enabling the free traversal of bats around the building interiors;
- The buildings possess no lofts, and it should be noted 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 (as a hibernation or maternity roost, for example);
- No evidence of bats was identified throughout either Shed 6 or the associated lean-to during the PRA;
- The survey concluded that; although no direct evidence of bats was identified during the PRA, Shed 6 and the associated lean-to both possess some limited PRFs for small numbers of bats. Furthermore, a number of potential access/egress points for bats were recorded around the survey buildings which may enable bats to access these aforementioned PRFs. Shed 6 and the associated lean-to were subsequently concluded to possess low potential to support roosting bats;
- Based upon the results of the PRA, it was recommended that **a minimum of 1 presence/absence survey in the form of a dusk emergence survey for bats should be undertaken** in order to determine whether bats are roosting within Shed 6 and the associated lean-to;
- An initial dusk emergence survey was subsequently undertaken on Thursday 28th May 2026. A total of **2 bats were observed to emerge from the survey building**, with these being observed to emerge from the lean-to interior and roller-shutter door on the (NE) aspect of Shed 6. Furthermore, a common pipistrelle was also directly observed to forage within the Shed 6 interior, before entering a roost situated within a gap between brickwork and cladding on the interior (SE) wall of the building;
- **Shed 6 is therefore a confirmed bat roost;**
- 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 building for roosting purposes;
- A second dusk emergence survey was subsequently undertaken on Thursday 25th June 2026. **A single bat was observed to emerge from Shed 6** during the second dusk emergence survey, with this consisting of a common pipistrelle which emerged from the roller-shutter door on the (SW) aspect of the survey building after foraging for some time within the building interior;
- Based upon the results of the preliminary roost assessment and subsequent activity surveys, the survey building is a **confirmed summer day roost for a small number (<5) of 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 at warehouses designated as Shed 6, East Way Road, Newport, NP20 2NQ.

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 the site is accessible from East Way Road which runs along the southern / south-eastern boundary. The survey sheds are designated as Shed 6 and an associated lean-to.

The OS grid reference for the approximate centre of the survey area is ST 32139 84648.

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

Alexandra Docks is located immediately to the north 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.

The site is bound by East Way Road, which runs along the southern / south-eastern boundary of the site, beyond which a large open area of mixed habitat is located, followed by the River Usk approximately 480m to the south-east.

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. Significant industrial sites including a landfill, Simex Uskmouth Power and Liberty Steel are also located approximately 0.9km, 0.95km and 1.05km to the north-west, south-east and 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

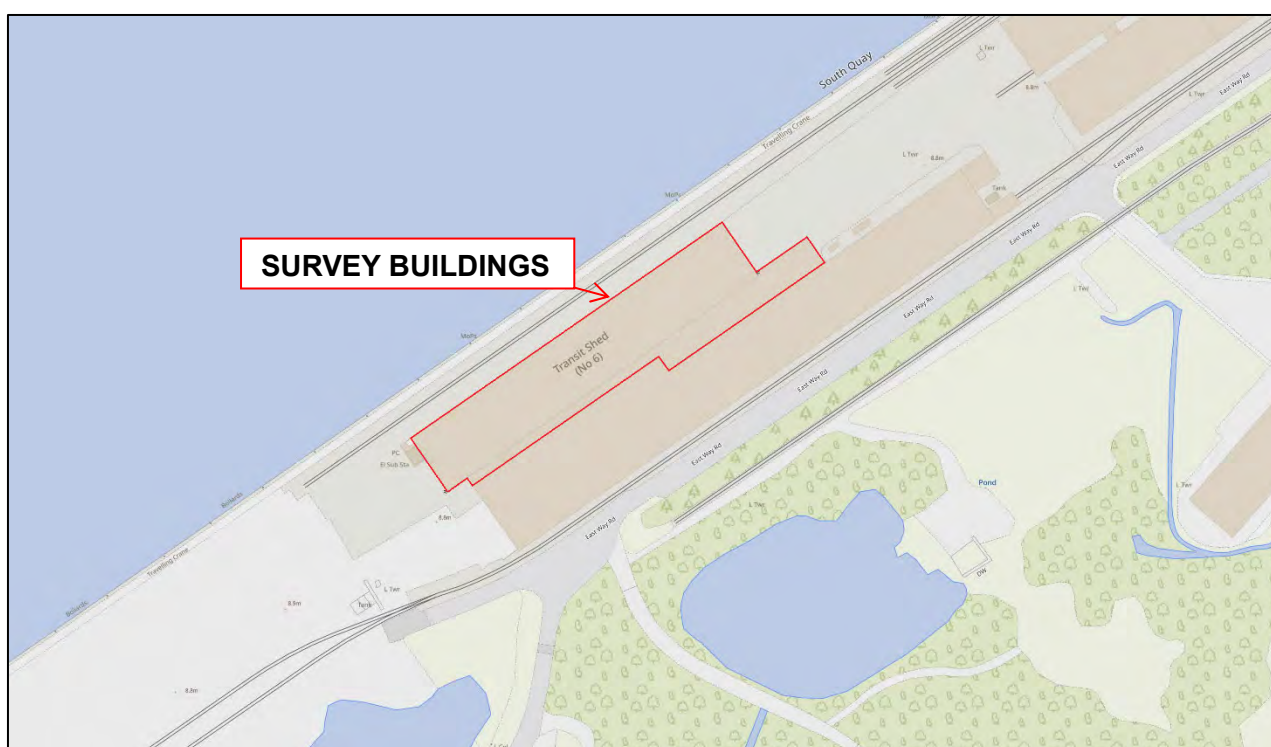
3.1 Site Details

The approximate centre of the survey buildings is located at Grid Reference ST 32139 84648 and the site address is listed below: -

Shed 6
Associated British Ports
East Way Road
Newport
NP20 2NQ

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: **S096241/1**) on 24th March 2026.

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

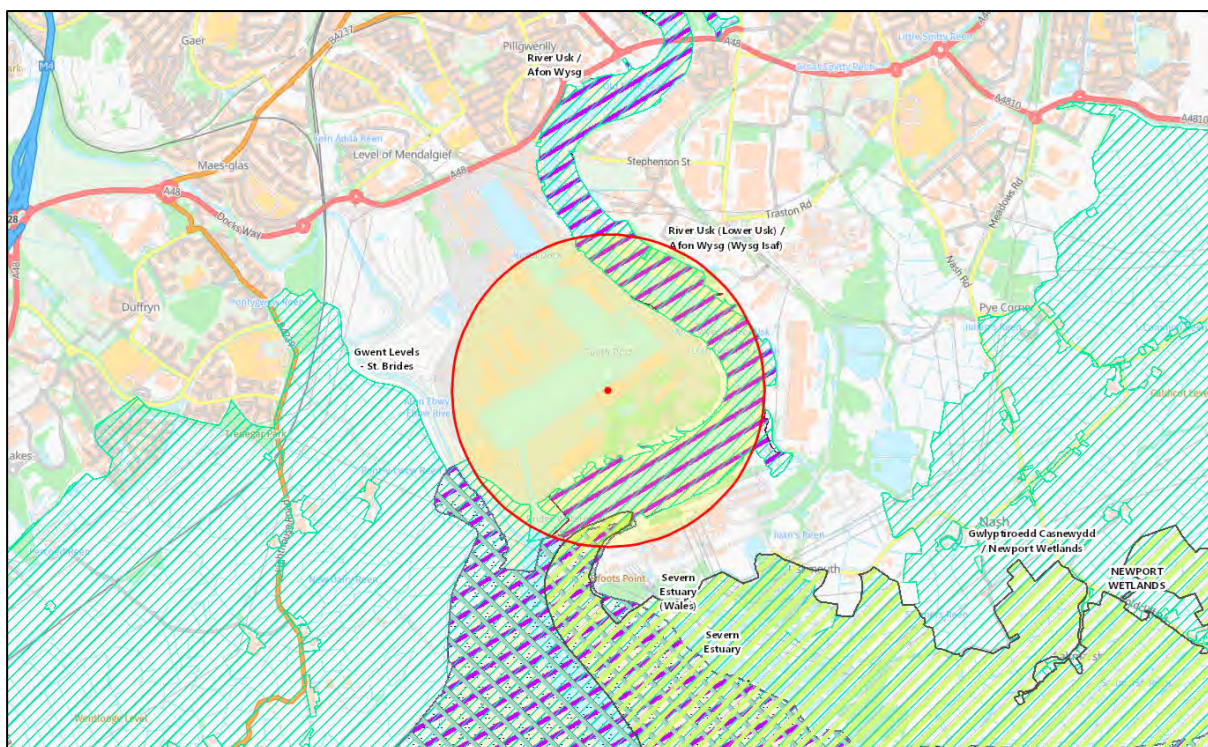
4.4.1 Statutory Designated Sites

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

A total of 7 records of statutory designated sites were returned within 1km of the proposed development site, with all records relating to the River Usk, Severn Estuary and Newport Wetlands.

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: -

- **Severn Estuary** – Special Protection Area (SPA), Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI), RAMSAR;
- **River Usk (Lower Usk)** – Special Area of Conservation (SAC), Site of Special Scientific Interest (SSSI);
- **Newport Wetlands** – National Nature Reserve (NNR), Site of Special Scientific Interest (SSSI).

Severn Estuary (SPA, SAC, SSSI, RAMSAR) – Citation

The Severn Estuary lies on the south west coast of Britain at the mouth of four major rivers (the Severn, Wye, Usk and Avon) and many lesser rivers. The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. The intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh is one of the largest and most important in Britain.

The estuarine fauna includes: internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory fish, including the nationally rare and endangered allis shad. The SSSI forms the major part of a larger area of estuarine habitat, which includes the Upper Severn Estuary, the Taf/Ely Estuary and Bridgwater Bay.

The estuary fringes have large areas of saltmarsh. A range of saltmarsh types is present, with both gradual and stepped transitions between bare mudflat and upper marsh.

The fluctuating salinity and highly mobile sediments with consequent high turbidity limits the benthic invertebrates to relatively few species. A greater variety of invertebrates tend to occur on the intertidal rock platforms, a more stable habitat with rock pools and a relatively high cover of seaweeds.

Seven species of migratory fish move through the Estuary between the sea and rivers. There are particularly large numbers of Atlantic salmon and common eel.

The SSSI is of international importance for wintering and passage wading birds, with total winter populations averaging about 44,000 birds. Numbers can be considerably higher during severe winters when owing to its mild climate, the Severn supports wader populations that move in from the colder coasts of Britain. The SSSI is internationally important for dunlin and supports about 7.5% of the British wintering population of this species.

The estuary as a whole supports about 10.5% of the British wintering population and is the single most important wintering ground of dunlin in Britain.

In late winter and early spring the SSSI supports nationally important numbers of shelduck, following the partial dispersal from their moulting grounds in Bridgwater Bay. There are also significant numbers of wigeon.

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*).

Newport Wetlands (NNR & SSSI) – Citation

This site is of special interest for its breeding and over-wintering birds, invertebrates, and aquatic and marginal flora. Also of special interest are the ditch habitat and reedbeds.

The site lies within the Gwent Levels, part of an area of low lying lands between Cardiff and Chepstow which is drained by an ordered network of drainage ditches. The Levels are an example of one of the most extensive areas of reclaimed wet pasture in Great Britain, and is the largest area of its kind in Wales. Together these levels systems constitute a national series of sites, each with its own special features. Newport Wetlands lies to the south of the city of Newport, adjacent to the Severn Estuary and close to the mouth of the River Usk. It is part of the larger Newport Wetlands Reserve constructed to meet the commitment by the UK Government to create “a substantial area of wetland habitat on the shores of the Severn Estuary” as part of the compensation for the loss of the Taf/Ely Estuary SSSI following the construction of the Cardiff Bay Barrage.

The majority of the site lies below mean high water level, with the sea being excluded by extensive flood defences.

In winter, Newport Wetlands support nationally (UK) important numbers of shoveler and black-tailed godwit.

During the summer, the wet grasslands, saline lagoons and reedbeds on the site support an exceptional variety of breeding birds, including nationally (UK) important breeding populations of avocet, redshank, lapwing, water rail, Cetti's warbler and bearded tit. In addition, breeding populations of ringed plover and little ringed plover are also present.

The aquatic invertebrate assemblage is very diverse and compares well with other similar areas in Britain. Many nationally rare and scarce species are present, including the great silver water beetle, the water beetle *Hydaticus transversalis* and the ornate brigadier soldierfly. The nationally scarce spider *Tetragnatha striata* has a strong population in the reedbeds and the nationally scarce shrill carder bee is found throughout the site. Overall, some 400 invertebrate species have been recorded at the site, several of which are confined to the Gwent Levels in Wales.

The watercourses are rich in plant species and communities, many of which are rare or absent in other levels systems. This is due to the variety of ditch types, the different management regimes and timing of the management; all of which results in a mosaic of ditch habitats across the site.

The reedbeds at Newport Wetlands are the largest within the south-east Wales area. In wetter areas with standing water, the vegetation is almost entirely composed of common reed. However, in drier areas, it is joined by marsh bedstraw, hemp agrimony and great willowherb. In addition, the site has a number of other habitats that add to its overall wildlife value. These include hedgerows, scrub, woodland and grassland.

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 Ebbw Site of Importance for Nature Conservation (SINC), with this being located approximately 1km to the west of the survey buildings. The second record meanwhile consists of an unnamed SINC located adjacent to the eastern side of the River Usk, approximately 800m to the north-east.

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 which have been designated as Shed 6.

The buildings being surveyed included: -

- **Shed 6 (Transit Shed No 6)** – A brick and single-skin steel clad warehouse building with single-skinned corrugated steel roof. No 6 Transit Shed is approximately 185m x 30m in dimension;
- **Associated Lean-to** – A steel framed and skinned lean-to of approximate 200m x 14m dimension is affixed to the southern wall of Shed 6, and located between Shed 6 and Shed 7 situated to the south. The roof of Shed 6 consists of single-skinned corrugated steel sheeting, interlaced with translucent UPVC which serve as skylights.

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

Figure 3 – Survey Building Configuration and Designations



Both Shed 6 and the associated lean-to are rectangular in shape, with the lean-to being situated between Shed 6 and Shed 7 and affixed to both sheds.

Shed 6 is of approximate 185m x 30m dimension, with the associated lean-to being of approximate 200m x 14m dimension, and the lean-to extends approximately 30m beyond the north-eastern side of Shed 6.

The north-eastern end of the lean-to is open in design to allow internal access for vehicles such as forklifts, with the interior space being utilised for the storage of imported materials and products. The south-western end of the lean-to possesses a single-skin corrugated steel wall, with a dedicated single doorway for pedestrian access.

The interior space of the lean-to is connected to both the adjacent Shed 6 and Shed 7, with large openings enabling both pedestrian and vehicular access to the sheds from the lean-to itself.

Subsequently, the interior of both Shed 6 and the lean-to creates a singular large space, divided by an interior wall with dedicated access points as discussed.

The lean-to is constructed largely with steel, with corrugated steel sheets being used in the construction of both the roof and walls of the shed. Translucent UPVC sheets have also been set within the roof of the lean-to along the entirety of the building, leading to the interior space of the lean-to being very well-lit by natural light during the day.

Shed 6 meanwhile has been constructed with a combination of bricks and corrugated steel sheeting. The brick to cladding ratio is different along each aspect of the survey building. The north-western aspect has been constructed from brick up to roof level, whilst the interior shared wall between the lean-to and Shed 6 is constructed from brick up to half the wall's height, with the remaining wall consisting of steel cladding up to roof level.

The exterior of the Shed 6 and the associated lean-to are visible in Figures 4 – 9 below: -

Figure 4 – (NE) Aspect of Shed 6 Looking (SW)



Figure 5 – (NE) Corner of Lean-to, Looking (S)



Figure 6 – (SW) Aspect of Lean-to, Looking (NE)



Figure 8 – (W) Corner of Shed 6, Looking (E)



Figure 9 – (NW) Aspect of Shed 6, Looking (E)



Shed 6 and the associated lean-to are situated on one of the busiest locations of the ABP Newport site. Ships are frequently docked within Alexandra Dock to the north of the building, and cranes are utilised to remove products from the ships (largely consisting of steel coils) onto the wharf.

High capacity forklifts are then used to move the steel coils and other products from the wharf for storage within both Shed 6 and the associated lean-to. Traffic movements during the survey were therefore constant, with heavy

plant movements being extremely frequent both within the survey buildings and exterior areas across the duration of the PRA.

Steel roller shutter doors are situated within both the north-western and south-eastern walls of Shed 6, and these doors remain open during the day to enable heavy plant to move in and out of the shed to undertake the aforementioned operations.

Large timber bay doors are situated within the north-western wall of Shed 6, although these were closed during the survey. An additional 2 steel roller shutter doors are also set within this wall, and these were also observed to be open during the PRA.

Openings are present between the interior wall of Shed 6 and the lean-to located to the immediate south-east. Subsequently, any bats which are able to enter the lean-to or Shed 6 (via any of the aforementioned roller-shutter doors, or via the north-eastern open end of the lean-to, for example) are able to gain access to any of the interior locations of each respective building, and any PRFs situated within.

As discussed, much of Shed 6 is largely constructed from engineering bricks. The brickwork was observed to be in generally excellent condition given the likely age of the building. It should be noted however that small cracks were recorded in some areas from the exterior of the building, particularly within the external exterior corners toward the south-west.

An attempt has been made in both of these corners to secure the brickwork with steel brackets, although the small cracks within the brickworks which remain were assessed to potentially provide roosting opportunity for small numbers of opportunistic crevice-dwelling bats.

Shed 6 and the associated lean-to possesses steel fascia boards, with steel guttering also being located along the apex of the north-western wall of Shed 6. These steel features were observed to be in excellent condition during the PRA, with no areas of significant damage or potential roosting for bats being identified from the building exterior.

The corrugated steel walls of both Shed 6 and the lean-to were also observed to be in excellent condition during the survey, with no significant areas of damage being recorded. Some lifting was recorded toward the south-west of the building however, which may offer some limited roosting potential for crevice-dwelling bats. The single-skinned design of the walls does however mean that there is no interior void present which may be utilised by bats within this feature.

As discussed, the roofs of both Shed 6 and the lean-to have also been constructed from single-skinned corrugated steel sheets. The roof sheets across both buildings were observed to be in excellent condition, with no areas of damage being identified which could be used as either a potential access/egress point or PRF for bats.

Shed 6 does not possess any windows, with the interior space being lit entirely by artificial lighting and from light ingress via the aforementioned open roller shutter doors around the building. It should be noted however that due to the operational nature of the building, the artificial lights are kept on for most of the time (including at night), significantly reducing the interior space of Shed 6 from being utilised as either a day or night roost.

The interior of the lean-to is extremely well-lit in comparison, owing to the numerous UPVC skylights which have been set throughout the entirety of the roof, along with artificial lighting which is also present within this section of the building. Subsequently, this section of the building also possesses low potential to support day-roosting bats.

The roller shutter doors are however closed during the night. With this being said, large gaps are still present above the tops of these roller shutter doors even when closed, which could serve as potential access/egress points for both void and crevice-dwelling bats to the building interior.

Photographs of particular features of note around the exterior of the survey buildings are visible in Figures 10 – 12 overleaf: -

Figure 10 – (SW) Corner of Shed 6. Some Lifting of Cladding May Offer Roosting Potential for Crevice-Dwelling Bats



Figure 11 – (NW) Aspect of Shed 6. Open Roller-Shutter Doors and Gaps around Tops of Doors when Closed Offer Potential Access/Egress to Interior for Bats



Figure 12 – Crack within Brickwork at (SW) Corner of Shed 6 Exterior Offers Some Limited Roosting Potential for Crevice-Dwelling Bats



4.5.2 Building Interiors

As discussed, Shed 6 and the associated lean-to are affixed and connected internally by a number of vehicular accesses – 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 open north-eastern end of the lean-to, along with gaps around roller shutter doors, which enables the free access/egress for bats to the building interiors via these avenues.

The interior of the survey buildings can be viewed in Figures 13 – 24 below and overleaf: -

Figure 13 – Shed 6 Interior, Looking (SW)



Figure 14 – Shed 6 Interior, Looking (NE)



Figure 15 – Shed 6 Interior. Steel Coils are visible on Chocks, Ready for Transport



Figure 16 – Open Roller Shutter Door at (NE) Side of Building. Operational Forklift visible, Transporting Coil



Figure 17 – Additional Interior Brick Structure within Shed 6 which Houses a Canteen and Substation

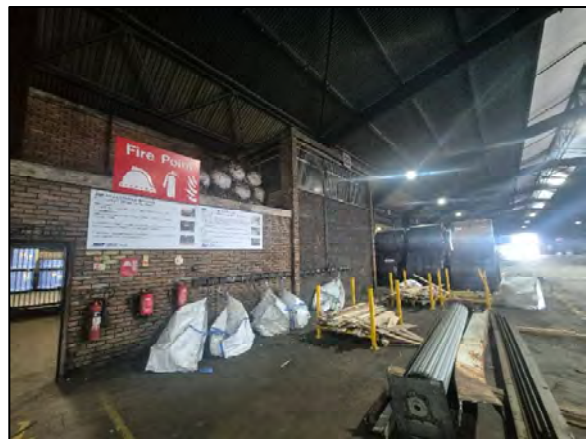


Figure 18 – Additional view of Brick Structure within Shed 6. Brickwork Observed to be in Excellent Condition



Figure 19 – Small Cracks are Present within Brickwork, Particularly in Areas where Steel Features Intersect. These Gaps May Offer Roosting Potential for Crevice-Dwelling Bats

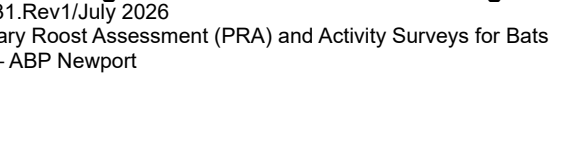


Figure 20 – Single-Skin Steel Cladding on Shared Wall Between Shed 6 and Lean-To. Small Gaps Between Corrugations and Brick Wall May Offer Roosting Potential for Crevice-Dwelling Bats





Figure 21 – Detail of Steel Framework and Single-Skin Steel Sheet Cladding Making up Roof of Shed 6. Cladding Observed in Generally Excellent Condition Although a Small Hole was Recorded which May Permit Access/Egress for Bats

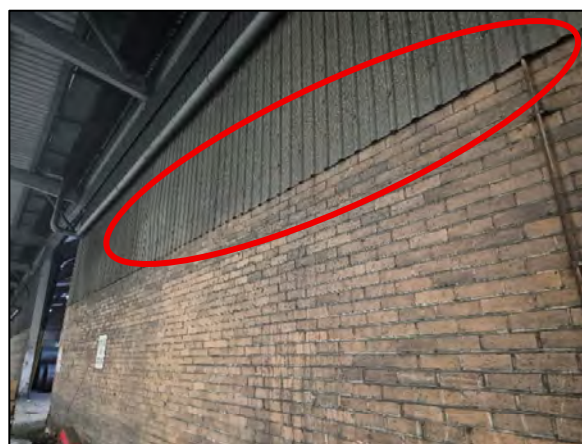


Figure 22 – Interior view of Lean-To, Looking (NE). Significant Light Ingress via UPVC Skylights Lead to the Interior being Extremely Well-Lit by Natural Light During the Day, Reducing the Building's Potential to be Utilised as a night Roost



Figure 23 – Lean-to Interior, Looking (NE)

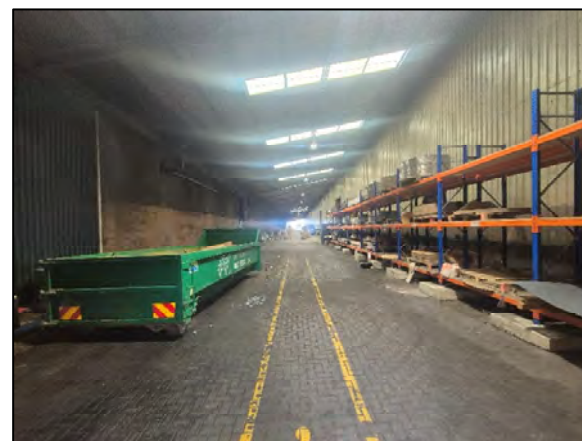


Figure 24 – Lean-to Interior, Looking (SW)



Shed 6 possesses a shallow pitched A-framed gable roof, which is steel framework and associated bracing beams, purlins and rafters. The associated lean-to meanwhile possesses a mono-pitched steel roof, which is affixed to both Shed 6 and the adjacent Shed 7 to the south-east.

The roofs consists of corrugated single-skinned steel sheets (interlaced with numerous skylights within the lean-to), with the vast majority of the roof sheets being observed to be undamaged during the survey (with the exception of a small area of damage as presented in Figure 21, which may enable the access/egress of bats to the Shed 6 interior).

The interior of Shed 6 does not receive much natural light, owing to a lack of skylights within the roof of this section of the building. Light ingress is recorded via opened roller shutter doors on 3 of the 4 aspects of the building, however, the interior of the building is very well-lit by artificial lighting, owing to it still being in operational use by ABP.

The lean-to interior, meanwhile, is extremely well-lit by natural light (owing to the presence of the aforementioned skylights within this section of the building, along with the open north-eastern end), whilst significant amounts of artificial lighting are also present here.

The well-lit nature of both building interiors by a combination of natural and artificial light significantly reduces both sections of the building from being utilised as a day roost by bats.

Both interior spaces of Shed 6 and the lean-to were observed to be in constant operational use during the survey. Traffic movements within the shed were frequent, with heavy plant being utilised to transport steel coils from the adjacent wharf for storage within both sections of the building. The buildings are subsequently subject to significant levels of noise, vibration and general human disturbance on a day-to-day basis, reducing the building's potential to be utilised by significant numbers of bats.

A number of steel purlins, joists and other steel features which make up the roofs of Shed 6 and the lean-to 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. Small gaps present between intersections of these steel features were assessed to offer some roosting potential for opportunistic crevice-dwellers.

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 or maternity roosts. This is due to a number of reasons, including; variable interior temperatures resulting from numerous open doorways, high levels of human disturbance on a daily basis, the open nature of the building interiors leading to a lack of shelter and a lack of suitable PRFs which could be used for either of these roost types.

As stated, Shed 6 has been constructed from a combination of brick and steel cladding, whilst the associated lean-to has been constructed entirely from steel. All steel features making up either cladding or roof sheets of the building was observed to be single-skinned, meaning that no void is present between sheets which may be utilised by roosting bats.

For the most part, the brickwork across the walls of Shed 6 was observed to be in excellent condition given the age of the building, with limited areas of damage being identified within the building interior.

It should be noted however that some areas of damage were identified which could be utilised by crevice-dwelling bats. These areas of damage are almost exclusively located where steel features making up the roof of the building intersect with brickwork, as visible in Figure 19. These small areas of damage were assessed to potentially offer roosting opportunities for small numbers of crevice-dwelling bats.

Furthermore, the brickwork making up the walls of Shed 6 consists of multiple (2 to 3) layers. Subsequently, any surface damage to brickwork may open up into small voids situated between the different layers of bricks making up these walls.

A standalone brick structure is also present within Shed 6, as visible in Figures 17 and 18. This building houses a small substation and a mess area for staff which work within the survey buildings. The brickwork making up this structure was observed to be in excellent condition, with no PRFs for bats being identified.

Additional PRFs for bats within Shed 6 and the lean-to were identified within the shared south-eastern wall. Cladding has been overlaid onto the brickwork in this location (as visible in Figure 20), and small gaps between the corrugations of the steel cladding and the brickwork were assessed to offer some roosting potential for small numbers of crevice-dwelling bats.

All areas of Shed 6 and the lean-to interiors were surveyed extensively for evidence of bats in the form of feeding remains, smudging, droppings, live bats etc. Similarly, the joins between steel joists and rafters, along with connections between external cladding and the interior steel framework were inspected wherever possible for signs of bat use and for any gaps which may be suitable for crevice-dwelling bats.

Although PRFs for bats were identified within both Shed 6 and the associated lean-to, no direct or indirect evidence of bats was identified within either building during the PRA.

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.

No evidence of bats was identified throughout the entirety of Shed 6 or the associated Lean-to during the PRA.

4.5.4 Potential Access for Bats

A number of potential access/egress points for bats to the building interiors were recorded during the PRA. Potential access areas and locations within the buildings are outlined in further detail below:-

- **Open Roller Shutter Doors / Gaps Around Closed Roller Shutter Doors** – Numerous open roller shutter doors were visible around Shed 6 across all aspects of the building. Although the roller shutter doors are closed overnight for security purposes, gaps are present around the closed doors which are of sufficient size to enable both crevice and void dwelling bats potential access to the building;
- **Open North-Eastern End of Lean-To** – The north-eastern end of the lean-to possesses no wall, and is open in nature (as visible within Figure 5). The open nature of this section of the building allows the free access/egress of bats to the lean-to interior at all times, and bats which enter the lean-to are subsequently able to access the interior of Shed 6 via open doorways in the south-eastern interior / shared wall;
- **Small Damaged Area to Steel Roof Sheet of Shed 6** – Although the vast majority of the steel sheets making up the roof of both Shed 6 and the lean-to were in excellent condition during the survey, a small area of damage was recorded (as visible in Figure 21) which may permit access/egress for both crevice and void-dwelling bats to the interior of Shed 6;
- **Open Plan Nature of Building Interior, Connecting Shed 6 & Lean-to** – Due to the open plan nature of the interior of the survey buildings, any bats which are able to access the interior of the lean-to or Shed 6 via any of the above avenues are subsequently able to fly freely throughout the vast majority of the building interior, and access any PRFs situated within.

4.5.5 Potential Features for Bats

Both the interior and exterior of the survey buildings were 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 interiors are present which may allow bats to enter the building and access PRFs identified during the survey.

PRFs identified within the buildings include: -

- **Steel Roof Features and Intersections between Adjoining Sections** – A number of exposed steel roof support features, including joists and purlins were identified on the underside of the roof of the buildings, which may be suitable for both free-hanging bats, whilst offering very limited roosting potential for opportunistic

crevice-dwelling bats within areas in which the steel framework intersect. 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;

- **Cracks within Intersections between Steel Framework of Roof and Brickwork Walls of Shed 6 –** Although the majority of the brickwork within the building interior was in excellent condition, some small gaps are present, particularly where the steel framework making up the roof of Shed 6 intersects with brickwork in the interior corners of the building (as visible in Figure 19). These gaps offer some potential roosting opportunity for crevice-dwelling bats;
- **Small Cracks within Exterior Brickwork at (SW) and (NW) Corners of Shed 6 –** Small cracks are located within the brickwork making up the south-western and north-western exterior corners of Shed 6 (as visible in Figure 12). These cracks may offer potential roosting opportunity for crevice dwelling bats, whereby the cracks may open up into larger voids situated within the brickwork;
- **Lifting of External Cladding at (SW) of Shed 6 –** Some damage / lifting of the cladding situated at the south-western exterior of Shed 6 was observed (as visible in Figure 10), which was assessed to offer some potential for crevice-dwelling bats;
- **Gaps between Cladding and Brickwork of Shared Interior Wall between Shed 6 and Lean-to –** Small gaps are present between the corrugated steel cladding and brickwork of the shared interior wall situated between Shed 6 and the lean-to (as visible in Figure 20). These small gaps may offer some roosting potential for crevice-dwelling bats;
- **Open and Well-Connected Interior of Shed 6 and Lean-to –** The interior of the survey buildings is open in nature, owing to Shed 6 and the adjacent lean-to sharing a wall which possesses a number of internal vehicular access points. 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 6 or the lean-to;

The survey concluded that; although no direct evidence of bats was identified during the PRA, Shed 6 and the associated lean-to both possess some limited PRFs for small numbers of bats. Furthermore, a number of potential access/egress points for bats were recorded around the survey buildings which may enable bats to access these aforementioned PRFs.

Based upon the above, Shed 6 and the associated lean-to were concluded to possess **low 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.

The immediate surroundings to the north, west and east of the survey buildings consists of hardstanding, whilst the southern side of the survey buildings is bound by an adjacent industrial shed, namely Shed 7.

Alexandra Docks are located immediately to the north of the survey building. As stated, Shed 6 and the associated lean-to are located on one of the busiest sections of the ABP Newport site.

Ships are frequently docked within the docks to the north-west, whereby large cranes are used to transport products (largely consisting of steel coils and other steel materials) onto the adjacent wharf. Heavy forklifts are then used to move the coils and other products for storage within Shed 6 and the lean-to.

East Way Road runs alongside the south-eastern boundary beyond Shed 6 and Shed 7. This road exhibits high levels of vehicular activity, owing to the road being the only access point to nearby industries including Hanson Aggregates and Saica Pack Newport, situated approximately 150m and 250m to the west and south-west of the survey buildings respectively.

A large area of mixed habitat is situated beyond East Way Road to the south-east of the survey buildings. Habitats identified within this area include dense and scattered scrub, semi-improved grassland, a large pond and semi-

natural deciduous woodland amongst others. The River Usk is situated beyond these habitats, approximately 480m to the south-east of the survey buildings.

These habitats were assessed to provide ample potential to support foraging and commuting bats, although the woodland identified within the habitats to the south-east were immature, and assessed to be generally unlikely to directly support roosting bats. The presence of a pond in the nearby vicinity (approximately 90m to the south-east of the survey buildings) also increased the likelihood of bats utilising the habitats to the south-east, to the increased invertebrate interest identified within this area.

Connectivity between the habitats identified to the south-east of the survey buildings and additional roosting and foraging habitat for bats elsewhere was generally concluded to be good, with vegetation pathways alongside the River Usk and nearby Ebbw River offering good commuting opportunity for a number of potential bat species.

Furthermore, 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.

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. Significant industrial sites including a landfill, Simex Uskmouth Power and Liberty Steel are also located approximately 0.9km, 0.95km and 1.05km to the north-west, south-east and 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 designated as Shed 6 and the associated lean-to were surveyed in detail on 24th March 2026 to assess their potential to support roosting bats.

No evidence of bats was identified throughout the entirety of the survey buildings during the PRA.

Numerous potential access/egress points for bats to both building interiors are however present, and the building interiors were concluded to be of sufficient size to potentially support void-dwelling bats.

A small number of PRFs were identified during the PRA which were assessed to provide some potential to support opportunistic bats. These PRFs are almost exclusively situated within Shed 6, with extremely limited roosting opportunities being identified within the associated lean-to.

However, the poor quality of PRFs identified during the survey reduces the likelihood that the buildings are 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 buildings were concluded to possess negligible potential to support 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.

The PRA concluded that **the lean-to possesses negligible potential to support roosting bats**, owing to a lack of suitable PRFs being identified within the building.

Shed 6 meanwhile was observed to possess higher levels of potential to support roosting bats, with some PRFs being identified which may be utilised by small numbers of bats. The results of the PRA subsequently conclude that **Shed 6 possesses low potential to support roosting bats**.

5.3 Recommendations

Shed 6 was assessed as having **low potential** to support roosting bats, owing to the presence of numerous potential access/egress points to the building for bats being recorded in conjunction with some PRFs being situated within the building interior.

It should be noted however that no evidence of bats was identified throughout the entirety of the building interiors during the PRA.

Given that the PRA identified accessible PRFs within Shed 6 which may be utilised by bats but no direct evidence was identified during the survey, **presence/absence surveys** in the form of **dusk emergence surveys** will be required in order to categorically determine whether bats are utilising the survey buildings.

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 undertaken to determine the presence or absence of bats within the building, and to inform the requirement for further surveys and/or mitigation should bats be confirmed to be roosting within Shed 6 and/or the associated lean-to.

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 buildings: -

- Presence/absence surveys will be required in the form of a **minimum of one dusk emergence survey**. This will inform any further survey work where required, and will enable appropriate mitigation relative to the proposals and species to be designed. The results will also be used to inform an EPSL application if required.

6.0 DUSK EMERGENCE SURVEYS

The PRA previously concluded that the Shed 6 possesses **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, although no direct evidence of bats was recorded during the survey, a number of potential access / egress points to these roosting features were also recorded during the PRA.

Further to the result of the PRA, it was determined that **the buildings should be subjected to a minimum of one presence/absence dusk emergence survey** to determine whether bats are actively utilising them for roosting purposes, and if so, to enable numbers and species of bats which are utilising the buildings to be determined.

The results of the survey(s) 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 28th May 2026 by Steve Owen; a licenced bat surveyor (NRW Licence no: **S096241/1**) who was assisted by 3 additional experienced ecologists. Further to the results of the initial dusk emergence survey, a second dusk emergence survey was also undertaken on 25th June 2026.

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.

Furthermore, Night Vision Aids (NVAs) were also utilised during the survey, whereby Nightfox Whisker IR cameras were also deployed facing different aspects of the survey building.

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 28th May 2026 and 25th June 2026 respectively.

Weather conditions in the preceding days had been fine, whilst the conditions on the day of each survey 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 Survey for Bats – Dusk Emergence Survey, 28/05/26

An initial dusk emergence survey was undertaken on Thursday 28th May 2026.

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 – First Dusk Emergence Survey Details

Dusk Emergence Survey	
Date	28/05/26
Weather Conditions	17°C, 30% cloud cover, wind Beaufort Scale 1, no rain throughout survey.
Sunset	21.17
Start time	20.47
Finish time	23.17

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. A Nightfox Whisker IR camera was also deployed to record the survey building.

Details are available below: -

- **Anabat Express 15** – this detector remained in a static location, facing toward the NE aspect of Shed 6;
- **Anabat Express 16** – this detector remained in a static location, facing toward the NW aspect of Shed 6;
- **Echo Touch Pro 2** – each surveyor had a dedicated detector to identify emerging, foraging and commuting bats;
- **Nightfox Whisker** – deployed to face SW aspect of survey building.

Observations made during the survey are listed below: -

Table 2 – First Dusk Emergence Survey Results

Record Number	Time	Description
n/a	20.47	SURVEY START
1	21.12 – 21.33	Common pipistrelle (<i>Pipistrellus pipistrellus</i>) observed foraging within Shed 6 (SW) interior;
2	21.30	Common pipistrelle emerged from lean-to opening at (NE) of Shed 6;
3	21.36	Common pipistrelle observed foraging in vicinity of lean-to at (NE) of survey building;
4	21.36	Common pipistrelle entered roost within building interior at (SW) of building. Pipistrelle entered between gap in brickwork and cladding on (SE) wall;
5	21.39	Common pipistrelle observed foraging in vicinity of lean-to at (NE) of survey building;
6	21.41	Common pipistrelle emerged from roller shutter door on (NE) aspect of Shed 6;
7	21.59	Noctule (<i>Nyctalus noctula</i>) detected by heterodyne, but not observed;
8	22.04	Noctule detected by heterodyne, but not observed;
9	22.07	Noctule detected by heterodyne, but not observed;
10	22.13	Common pipistrelle observed foraging within Shed 6 (SW) interior;
11	22.21	Noctule detected by heterodyne, but not observed;
12	22.22	Common pipistrelle detected by heterodyne, but not observed;
13	22.31	Noctule detected by heterodyne, but not observed;
14	22.47	Common pipistrelle entered Shed 6 via roller shutter door on (NE) aspect of building.
n/a	23.17	SURVEY END

6.5 Summary of First Dusk Emergence 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 **2 bats were observed to emerge from the survey building**, with these being observed to emerge from the lean-to interior and roller-shutter door on the (NE) aspect of Shed 6. Furthermore, **a common pipistrelle was also directly observed to forage within the Shed 6 interior, before entering a roost** situated within a gap between brickwork and cladding on the interior (SE) wall of the building;
- **Shed 6 is therefore a confirmed bat roost;**
- Bats observed to emerge from the survey building consist entirely of **common pipistrelle**;
- Bat abundance on the survey night was low. Although a lack of suitable foraging habitat in the immediate vicinity of the survey building was recorded during the survey, a large area of mixed habitat is situated beyond East Way Road to the south-east of the survey buildings which likely offers better foraging opportunity for bats;
- Only 2 species of bat were recorded during the survey, with these consisting of common pipistrelle and noctule;

- Commuting opportunity between the survey site and higher quality feeding habitat further afield is generally good, with both the River Usk and Ebbw River / associated riparian zones situated approximately 500m and 950m to the south and west respectively offering both commuting and foraging opportunity for bats;
- Foraging activity was primarily focused within the interior of Shed 6, with a common pipistrelle observed to be opportunistically foraging invertebrates which were gathering around the interior lights present within the warehouse.

6.6 Second Survey for Bats – Dusk Emergence Survey, 25/06/26

Based upon the results of the initial dusk survey undertaken in May 2026, 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 Thursday 25th June 2026.

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 – Second Dusk Emergence Survey Details

Dusk Emergence Survey	
Date	25/06/26
Weather Conditions	28°C, 40% cloud cover, wind Beaufort Scale 1, no rain throughout survey.
Sunset	21.33
Start time	21.03
Finish time	23.33

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 NE aspect of Shed 6;
- **Anabat Express 16** – this detector remained in a static location, facing toward the NW aspect of Shed 6;
- **Echo Touch Pro 2** – each surveyor had a dedicated detector to identify emerging, foraging and commuting bats;
- **Nightfox Whisker** – deployed to face SW aspect of survey building.

Observations made during the survey are listed below: -

Table 4 – Second Dusk Emergence Survey Results

Record Number	Time	Description
n/a	21.03	SURVEY START
1	21.39	Common pipistrelle observed commuting from (N) to (S) along (NE) side of Shed 6;
2	21.42	Common pipistrelle observed commuting from (E) to (W) above Shed 6;
3	21.50	Common pipistrelle observed foraging within (SW) interior of Shed 6;
4	22.05	Common pipistrelle emerged from roller shutter door on (SW) aspect of Shed 6;
5	22.48	Noctule detected on heterodyne, but not observed;
6	22.57	Noctule detected on heterodyne, but not observed;
7	22.58	Noctule detected on heterodyne, but not observed;
8	22.59	Noctule detected on heterodyne, but not observed;
9	23.07	Common pipistrelle observed commuting from (NE) to (SW) above Shed 6.
n/a	23.33	SURVEY END

6.7 Summary of Second Dusk Emergence Survey

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

- **A single bat was observed to emerge from Shed 6** during the second dusk emergence survey, with this consisting of a common pipistrelle which emerged from the roller-shutter door on the (SW) aspect of the survey building after foraging for some time within the building interior;
- Bat abundance on the survey night was very low, perhaps due to increased temperatures during the week prior to the survey. However, activity during the initial dusk emergence survey was also low, and subsequently it is thought that the building does not offer significant roosting potential for bats;
- A total of 2 bat species were recorded during the activity survey with these consisting of common pipistrelle and noctule;
- Foraging activity was once again primarily focused within the interior of Shed 6, although this consisted solely of a single common pipistrelle for a short duration during the survey.

7.0 PRA AND DUSK EMERGENCE SURVEYS – DISCUSSION AND RECOMMENDATIONS

7.1 Summary of Survey Effort

7.1.1 Preliminary Roost Assessment Summary

Shed 6 was 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 interior during the PRA.

Furthermore, a number of potential access points to the building interior was recorded, which have the potential to enable bats to freely access the PRFs located within the buildings. No direct evidence of bats was however identified within the building interior during the PRA.

With the above being said, due to the presence of PRFs within the building along with numerous potential access/egress points to these features being identified during the PRA, the survey building's potential to support roosting bats was classified as **low**.

As a result of the above, the recommendation was made that presence/absence surveys for bats should be undertaken in order to categorically determine whether bats are utilising the survey building, and if so, 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 May & June 2026

An initial presence/absence survey for bays (in the form of a dusk emergence survey) was undertaken on 28th May 2026 to fully assess the status of bats at the survey building and inform of potential 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 (whereby direct evidence of bats roosting within Shed 6 was observed), 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 at Shed 6 on 25th June 2026.

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

- The building and its condition offered some opportunities for bat occupation and roosting potential;
- A low number of bat calls were recorded during the emergence surveys, with a total of 2 bat species being recorded during the surveys (common pipistrelle and noctule);
- A total of **2 confirmed individual bats across a single species** were recorded to emerged from the building during the first survey (May 2026), with these consisting of **2 common pipistrelles**;
- A total of **1 confirmed individual bat across a single species** was recorded to emerge from the building during the second survey (June 2026), with this consisting of **a single common 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 a small number (<5) of common pipistrelles**;
- **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 roost potential for bats;
- Evidence of nesting bird use of the building was observed during the surveys, whereby a number of pigeons were identified within Shed 6. 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 40 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 (ECoW) 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, Shed 6 is a **confirmed summer non-breeding day roost for a small number (<5) of common pipistrelles**, based upon the evidence gathered during the PRA, dusk emergence 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 to 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 6, and these potential impacts include: -

- Destruction of a summer non-breeding 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 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: -

- 2 no. Schwegler 1FF Bat Boxes to be installed on retained trees on site;
- 2 no. Nestbox Company Large Bird Nest Box to be installed on retained trees on site;
- 2 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 2 no. Schwegler 1FF Bat Boxes on trees within habitat to the south-east of East Way Road 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 unintrusive 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

2 no. Nestbox Company Large Nestbox (or similar) and 2 no. Schwegler 1B Nest Boxes are to be installed in retained trees within habitat to the south-east of East Way Road to be retained as part of the proposals.

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 south-east of East Way Road beyond the survey buildings, and the proposed mitigation location is visible in Figure 25 below: -

Figure 25 – Proposed Mitigation Location, Highlighted in Green



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

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

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APPENDIX A

Drawings



Notes:

A3

Survey Building

Key	Bat Identified	Time	Comments
—	BAT 01 - C. Pip	21:12 21:33	Foraging within Shed 6 (SW) Interior
—	BAT 02 - C. Pip	21:30	Emerged from Lean-to Opening at (NE) Shed 6
—	BAT 03 - C. Pip	21:36	Foraging in Vicinity of Lean-to at (NE) of Building
—	BAT 04 - C. Pip	21:36	Entered Roost within Shed 6 along (SE) Interior Wall
—	BAT 05 - C. Pip	21:39	Foraging in Vicinity of Lean-to at (NE) of Building
—	BAT 06 - C. Pip	21:41	Emerged from Roller-Shutter Door at (NE) Shed 6
—	BAT 07 - N. Noc	21:59	Heard not seen
—	BAT 08 - N. Noc	22:04	Heard not seen
—	BAT 09 - N. Noc	22:07	Heard not seen
—	BAT 10 - C. Pip	22:13	Foraging within Shed 6 (SW) Interior
—	BAT 11 - N. Noc	22:21	Heard not seen
—	BAT 12 - C. Pip	22:22	Heard not seen
—	BAT 13 - N. Noc	22:31	Heard not seen
—	BAT 14 - C. Pip	22:47	Entered Shed 6 via Roller Shutter Door on (NE) Aspect

Job:

Associated British Ports, Newport - Preliminary Roost Assessment and Activity Surveys for Bats, Shed 6

Title:

First Dusk Emergence Survey Results - 28th May 2026

Date: July 2026

Scale: NTS

Drawn by: SO

Checked by: EP



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Revision No:

Date: 06/07/26



Notes:

A3

Survey Building

Key	Bat Identified	Time	Comments
—	BAT 01 - C. Pip	21:39	Commuting from (N) to (S) along (NE) of Shed 6
—	BAT 02 - C. Pip	21:42	Commuting from (E) to (W) above Shed 6
—	BAT 03 - C. Pip	21:50	Observed Foraging in Shed 6 Interior
—	BAT 04 - C. Pip	22:05	Emerged from Roller-Shutter Door at (SW) of Shed 6
—	BAT 05 - N. Noc	22:48	Heard not seen
—	BAT 06 - N. Noc	22:57	Heard not seen
—	BAT 07 - N. Noc	22:58	Heard not seen
—	BAT 08 - N. Noc	22:59	Heard not seen
—	BAT 09 - C. Pip	23:07	Commuting from (NE) to (SW) above Shed 6

Job:

Associated British Ports, Newport - Preliminary Roost Assessment and Activity Surveys for Bats, Shed 6

Title:

Second Dusk Emergence Survey Results - 25th June 2026

Date: July 2026

Scale: NTS

Drawn by: SO

Checked by: EP



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Revision No:

Date: 06/07/26

APPENDIX B

Citations of Designated Sites

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

NEWPORT

**GWLYPTIROEDD CASNEWYDD/
NEWPORT WETLANDS**

Date of Notification:

26 March 2010

National Grid Reference:

ST 350 830

O.S. Maps:

1:50,000 Sheet number: 171

1:10,000 Sheet number: ST38

Site Area:

374.2 ha

Description:

This site is of special interest for its breeding and over-wintering birds, invertebrates, and aquatic and marginal flora. Also of special interest are the ditch habitat and reedbeds.

The site lies within the Gwent Levels, part of an area of low lying lands between Cardiff and Chepstow which is drained by an ordered network of drainage ditches. The Levels are an example of one of the most extensive areas of reclaimed wet pasture in Great Britain, which also includes the Somerset Levels, Romney Marsh and the Pevensy Levels, and is the largest area of its kind in Wales. Together these levels systems constitute a national series of sites, each with its own special features. Newport Wetlands lies to the south of the city of Newport, adjacent to the Severn Estuary and close to the mouth of the River Usk. It is part of the larger Newport Wetlands Reserve constructed to meet the commitment by the UK Government to create “a substantial area of wetland habitat on the shores of the Severn Estuary” as part of the compensation for the loss of the Taf/Ely Estuary SSSI following the construction of the Cardiff Bay Barrage.

The site overlies a sequence of Holocene deposits, including estuarine clay and peat. The majority of the site lies below mean high water level, with the sea being excluded by extensive flood defences. Within the central wet grassland area, the traditional drainage system of the Gwent Levels has been amended by the creation of hydrologically discrete field blocks that can be individually flooded in winter. At the eastern end of the site, three shallow saline lagoons, linked by ditches, have been created. There is an inlet/outlet to the Severn Estuary which allows both water and salinity levels to be controlled throughout the year. At the western part of the site, 43ha of reedbed have been created on the pulverised fuel ash (PFA) reservoirs that used to be part of Uskmouth power station. As a result of the large embankments and filling of the reservoirs with PFA, most of this area lies above mean high water level. Water from the nearby Nash Sewage Treatment works is passed through a ‘tertiary treatment reedbed’ and then through the reedbed lagoons before being discharged to the Severn Estuary.

In winter, Newport Wetlands support nationally (UK) important numbers of shoveler *Anas clypeata* and black-tailed godwit *Limosa limosa*. Other over-wintering species that use the site include gadwall *A. strepera*, wigeon *A. penelope*, shelduck *Tadorna tadorna*, dunlin *Calidris alpina*, redshank *Tringa totanus*, whimbrel *Numenius phaeopus* and curlew *N. arquata*.

During the summer, the wet grasslands, saline lagoons and reedbeds on the site support an

exceptional variety of breeding birds, including nationally (UK) important breeding populations of avocet *Recurvirostra avosetta*, redshank, lapwing *Vanellus vanellus*, water rail *Rallus aquaticus*, Cetti's warbler *Cettia cetti* and bearded tit *Panurus biarmicus*. In addition, breeding populations of ringed plover *Charadrius hiaticula* and little ringed plover *C. dubius* are also present.

The aquatic invertebrate assemblage is very diverse and compares well with other similar areas in Britain. Many nationally rare and scarce species are present, including the great silver water beetle *Hydrophilus piceus*, the water beetle *Hydaticus transversalis* and the ornate brigadier soldierfly *Odontomyia ornate*. The nationally scarce spider *Tetragnatha striata* has a strong population in the reedbeds and the nationally scarce shrill carder bee *Bombus sylvarum* is found throughout the site. Overall, some 400 invertebrate species have been recorded at the site, several of which are confined to the Gwent Levels in Wales.

The watercourses are rich in plant species and communities, many of which are rare or absent in other levels systems. This is due to the variety of ditch types, the different management regimes and timing of the management; all of which results in a mosaic of ditch habitats across the site. This provides opportunities for a range of aquatic plants. In the ditches themselves, submerged species such as curly pondweed *Potamogeton crispus*, rigid hornwort *Ceratophyllum demersum* and, occasionally, stoneworts *Chara* spp. grow. Amongst the more notable species is hairlike pondweed *Potamogeton trichoides* which, in Wales, is almost entirely confined to the Gwent Levels area. There is a high diversity of floating plants, with all five British native duckweed species and frog-bit *Hydrocharis morsus-ranae* frequently abundant. Newport Wetlands is one of the few places on the Levels where nationally scarce least duckweed *Wolffia arrhiza*, the world's smallest flowering plant, is found at the north-western extent of its British range. Along the banks, fool's watercress *Apium nodiflorum*, lesser water-parsnip *Berula erecta*, tubular water dropwort *Oenanthe fistulosa* and water plantain *Alisma plantago-aquatica* occur.

The reedbeds at Newport Wetlands are the largest within the south-east Wales area. In wetter areas with standing water, the vegetation is almost entirely composed of common reed *Phragmites australis*. However, in drier areas, it is joined by marsh bedstraw *Galium palustre*, hemp agrimony *Eupatorium cannabinum* and great willowherb *Epilobium hirsutum*.

In addition, the site has a number of other habitats that add to its overall wildlife value. These include hedgerows, scrub, woodland and grassland.

Remarks:

The northern and eastern boundaries of Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI are contiguous with part of the boundaries of Gwent Levels: Nash and Goldcliff SSSI and Gwent Levels: Whitson SSSI respectively.

The southern boundary of the Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is contiguous with part of the northern boundaries of the Severn Estuary SSSI, SPA, SAC and Ramsar site (which share a common boundary at this location).

The Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is one of a series of SSSIs within the area between Chepstow and Cardiff known as the Gwent Levels.

The Gwent Levels as a whole constitutes a valuable historic landscape that had been recognised as being of national importance and has accordingly been placed on the Register of Landscapes

of Outstanding Historic Interest in Wales.

The Gwlyptiroedd Casnewydd/ Newport Wetlands SSSI is owned and managed by CCW and is part of the larger Newport Wetlands National Nature Reserve.

The wintering birds for which the site is considered of special interest (namely the wintering populations of shoveler and black-tailed godwit) and those that are found in significant numbers (namely the wintering populations of dunlin, redshank, shelduck, gadwall, wigeon, whimbrel, curlew) form part of the internationally important populations of birds recognised by the classification under the 1979 EC Birds Directive of the Severn Estuary Special Protection Area (SPA). Wintering dunlin, redshank, shelduck and gadwall are individually qualifying species of the SPA. Wintering wigeon, whimbrel, curlew, shoveler and black-tailed godwit are part of the SPA's internationally important assemblage of wintering waterbirds.

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**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.

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Information Sheet on Ramsar Wetlands (RIS)

Categories approved by Recommendation 4.7 (1990), as amended by Resolution VIII.13 of the 8th Conference of the Contracting Parties (2002) and Resolutions IX.1 Annex B, IX.6, IX.21 and IX.22 of the 9th Conference of the Contracting Parties (2005).

Notes for compilers:

1. The RIS should be completed in accordance with the attached *Explanatory Notes and Guidelines for completing the Information Sheet on Ramsar Wetlands*. Compilers are strongly advised to read this guidance before filling in the RIS.
2. Further information and guidance in support of Ramsar site designations are provided in the *Strategic Framework for the future development of the List of Wetlands of International Importance* (Ramsar Wise Use Handbook 7, 2nd edition, as amended by COP9 Resolution IX.1 Annex B). A 3rd edition of the Handbook, incorporating these amendments, is in preparation and will be available in 2006.
3. Once completed, the RIS (and accompanying map(s)) should be submitted to the Ramsar Secretariat. Compilers should provide an electronic (MS Word) copy of the RIS and, where possible, digital copies of all maps.

1. Name and address of the compiler of this form:

Joint Nature Conservation Committee

Monkstone House

City Road

Peterborough

Cambridgeshire PE1 1JY

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Telephone/Fax: +44 (0)1733 – 562 626 / +44 (0)1733 – 555 948

Email: RIS@JNCC.gov.uk

FOR OFFICE USE ONLY.

DD MM YY

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Designation date

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Site Reference Number

2. Date this sheet was completed/updated:

Designated: 13 July 1995

3. Country:

UK (England/Wales)

4. Name of the Ramsar site:

Severn Estuary

5. Designation of new Ramsar site or update of existing site:

This RIS is for: Updated information on an existing Ramsar site

6. **For RIS updates only**, changes to the site since its designation or earlier update:

a) Site boundary and area:

**** Important note:** If the boundary and/or area of the designated site is being restricted/reduced, the Contracting Party should have followed the procedures established by the Conference of the Parties in the Annex to COP9 Resolution IX.6 and provided a report in line with paragraph 28 of that Annex, prior to the submission of an updated RIS.

b) Describe briefly any major changes to the ecological character of the Ramsar site, including in the application of the Criteria, since the previous RIS for the site:

7. Map of site included:

Refer to Annex III of the *Explanatory Notes and Guidelines*, for detailed guidance on provision of suitable maps, including digital maps.

a) A map of the site, with clearly delineated boundaries, is included as:

- i) **hard copy** (required for inclusion of site in the Ramsar List): yes ✓ -or- no ☐;
- ii) **an electronic format** (e.g. a JPEG or ArcView image) Yes
- iii) **a GIS file providing geo-referenced site boundary vectors and attribute tables** yes ✓ -or- no ☐;

b) Describe briefly the type of boundary delineation applied:

e.g. the boundary is the same as an existing protected area (nature reserve, national park etc.), or follows a catchment boundary, or follows a geopolitical boundary such as a local government jurisdiction, follows physical boundaries such as roads, follows the shoreline of a waterbody, etc.

The site boundary is the same as, or falls within, an existing protected area.

For precise boundary details, please refer to paper map provided at designation

8. Geographical coordinates (latitude/longitude):

51 13 29 N 03 02 57 W

9. General location:

Include in which part of the country and which large administrative region(s), and the location of the nearest large town.

Nearest town/city: Bristol

In the south-west of the United Kingdom, between Wales and England

Administrative region: Bro Morgannwg/ Vale of Glamorgan; Caerdydd/ Cardiff; Casnewydd/ Newport; Avon; City of Bristol; Fynwy/ Monmouthshire; Gloucestershire; Gwent; North Somerset; Somerset; South Glamorgan; South Gloucestershire

10. Elevation (average and/or max. & min.) (metres): 11. Area (hectares): 24662.98

Min. -4
Max. 17
Mean 0

12. General overview of the site:

Provide a short paragraph giving a summary description of the principal ecological characteristics and importance of the wetland.

The estuary's classic funnel shape, unique in Britain, is a factor causing the Severn to have the second-largest tidal range in the world (after the Bay of Fundy, Canada). This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide swept sand and rock. The species-poor invertebrate community includes high densities of ragworms, lugworms and other invertebrates forming an important food source for passage and wintering waders.

A further consequence of the large tidal range is the extensive intertidal zone, one of the largest in the UK, comprising mudflats, sand banks, shingle, and rocky platforms.

Glassworts and annual sea-blite colonise the open mud, with beds of all three species of eelgrass *Zostera* occurring on more sheltered mud and sandbanks. Large expanses of common cord-grass also occur on the outer marshes. Heavily grazed saltmarsh fringes the estuary with a range of saltmarsh types present. The middle marsh sward is dominated by common saltmarsh-grass with typical associated species. In the upper marsh, red fescue and saltmarsh rush become more prominent.

13. Ramsar Criteria:

Circle or underline each Criterion applied to the designation of the Ramsar site. See Annex II of the *Explanatory Notes and Guidelines* for the Criteria and guidelines for their application (adopted by Resolution VII.11).

1, 3, 4, 5, 6, 8

14. Justification for the application of each Criterion listed in 13 above:

Provide justification for each Criterion in turn, clearly identifying to which Criterion the justification applies (see Annex II for guidance on acceptable forms of justification).

Ramsar criterion 1

Due to immense tidal range (second-largest in world), this affects both the physical environment and biological communities.

Habitats Directive Annex I features present on the pSAC include:

- H1110 Sandbanks which are slightly covered by sea water all the time
- H1130 Estuaries
- H1140 Mudflats and sandflats not covered by seawater at low tide
- H1330 Atlantic salt meadows (*Glauco-Puccinellietalia maritima*)

Ramsar criterion 3

Due to unusual estuarine communities, reduced diversity and high productivity.

Ramsar criterion 4

This site is important for the run of migratory fish between sea and river via estuary. Species include Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla*. It is also of particular importance for migratory birds during spring and autumn.

Ramsar criterion 8

The fish of the whole estuarine and river system is one of the most diverse in Britain, with over 110 species recorded. Salmon *Salmo salar*, sea trout *S. trutta*, sea lamprey *Petromyzon marinus*, river lamprey *Lampetra fluviatilis*, allis shad *Alosa alosa*, twaite shad *A. fallax*, and eel *Anguilla anguilla* use the Severn Estuary as a key migration route to their spawning grounds in the many tributaries that flow into the estuary. The site is important as a feeding and nursery ground for many fish species particularly allis shad *Alosa alosa* and twaite shad *A. fallax* which feed on mysid shrimps in the salt wedge.

Ramsar criterion 5**Assemblages of international importance:****Species with peak counts in winter:**

70919 waterfowl (5 year peak mean 1998/99-2002/2003)

Ramsar criterion 6 – species/populations occurring at levels of international importance.**Qualifying Species/populations (as identified at designation):**

Species with peak counts in winter:

Tundra swan , <i>Cygnus columbianus bewickii</i> , NW Europe	229 individuals, representing an average of 2.8% of the GB population (5 year peak mean 1998/9-2002/3)
Greater white-fronted goose , <i>Anser albifrons albifrons</i> , NW Europe	2076 individuals, representing an average of 35.8% of the GB population (5 year peak mean for 1996/7-2000/01)
Common shelduck , <i>Tadorna tadorna</i> , NW Europe	3223 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)
Gadwall , <i>Anas strepera strepera</i> , NW Europe	241 individuals, representing an average of 1.4% of the GB population (5 year peak mean 1998/9-2002/3)
Dunlin , <i>Calidris alpina alpina</i> , W Siberia/W Europe	25082 individuals, representing an average of 1.8% of the population (5 year peak mean 1998/9-2002/3)
Common redshank , <i>Tringa totanus totanus</i> ,	2616 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)

Species/populations identified subsequent to designation for possible future consideration under criterion 6.

Species regularly supported during the breeding season:

Lesser black-backed gull , <i>Larus fuscus graellsii</i> , W Europe/Mediterranean/W Africa	4167 apparently occupied nests, representing an average of 2.8% of the breeding population (Seabird 2000 Census)
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Species with peak counts in spring/autumn:

Ringed plover , <i>Charadrius hiaticula</i> , Europe/Northwest Africa	740 individuals, representing an average of 1% of the population (5 year peak mean 1998/9-2002/3)
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Species with peak counts in winter:

Eurasian teal , <i>Anas crecca</i> , NW Europe	4456 individuals, representing an average of 1.1% of the population (5 year peak mean 1998/9-2002/3)
Northern pintail , <i>Anas acuta</i> , NW Europe	756 individuals, representing an average of 1.2% of the population (5 year peak mean 1998/9-2002/3)

Contemporary data and information on waterbird trends at this site and their regional (sub-national) and national contexts can be found in the Wetland Bird Survey report, which is updated annually. See www.bto.org/survey/webs/webs-alerts-index.htm.

See Sections 21/22 for details of noteworthy species

Details of bird species occurring at levels of National importance are given in Section 22

15. Biogeography (required when Criteria 1 and/or 3 and /or certain applications of Criterion 2 are applied to the designation):

Name the relevant biogeographic region that includes the Ramsar site, and identify the biogeographic regionalisation system that has been applied.

a) biogeographic region:

Atlantic

b) biogeographic regionalisation scheme (include reference citation):

Council Directive 92/43/EEC

16. Physical features of the site:

Describe, as appropriate, the geology, geomorphology; origins - natural or artificial; hydrology; soil type; water quality; water depth, water permanence; fluctuations in water level; tidal variations; downstream area; general climate, etc.

Soil & geology	alluvium, basic, biogenic reef, clay, cobble, gravel, limestone/chalk, mud, neutral, nutrient-rich, peat, sand, sandstone/mudstone, sedimentary, shingle
Geomorphology and landscape	cliffs, coastal, estuary, floodplain, intertidal rock, intertidal sediments (including sandflat/mudflat), islands, lowland, open coast (including bay), pools, subtidal rock (including rocky reefs), subtidal sediments (including sandbank/mudbank), tidal rapids
Nutrient status	eutrophic
pH	circumneutral
Salinity	brackish / mixosaline, saline / euhaline
Soil	mainly mineral
Water permanence	usually permanent
Summary of main climatic features	Annual averages (Cardiff, 1971–2000) (www.metoffice.com/climate/uk/averages/19712000/sites/cardiff.html) Max. daily temperature: 14.3° C Min. daily temperature: 6.8° C Days of air frost: 33.0 Rainfall: 1111.7 mm Hrs. of sunshine: 1518.0

General description of the Physical Features:

The Severn Estuary is a large estuary with extensive intertidal mudflats and sandflats, rocky platforms and islands. Saltmarsh fringes the coast backed by grazing marsh with freshwater ditches and occasional brackish ditches. The seabed is rock and gravel with subtidal sandbanks. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second-highest tidal range in the world. This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide-swept sand and rock. A further consequence of the large tidal range is an extensive intertidal zone, one of the largest in the UK.

17. Physical features of the catchment area:

Describe the surface area, general geology and geomorphological features, general soil types, general land use, and climate (including climate type).

The Severn Estuary is a large estuary with extensive intertidal mudflats and sandflats, rocky platforms and islands. Saltmarsh fringes the coast backed by grazing marsh with freshwater ditches and occasional brackish ditches. The seabed is rock and gravel with subtidal sandbanks. The estuary's classic funnel shape, unique in the UK, is a factor causing the Severn to have the second-highest tidal range in the world. This tidal regime results in plant and animal communities typical of the extreme physical conditions of liquid mud and tide-swept sand and rock. A further consequence of the large tidal range is an extensive intertidal zone, one of the largest in the UK.

18. Hydrological values:

Describe the functions and values of the wetland in groundwater recharge, flood control, sediment trapping, shoreline stabilization, etc.

Shoreline stabilisation and dissipation of erosive forces, Sediment trapping

19. Wetland types:

Inland wetland, Marine/coastal wetland

Code	Name	% Area
G	Tidal flats	84.1
H	Salt marshes	4.7
D	Rocky shores	4.7
E	Sand / shingle shores (including dune systems)	4.4
Tp	Freshwater marshes / pools: permanent	1
B	Marine beds (e.g. sea grass beds)	0.9
F	Estuarine waters	0.2

20. General ecological features:

Provide further description, as appropriate, of the main habitats, vegetation types, plant and animal communities present in the Ramsar site, and the ecosystem services of the site and the benefits derived from them.

The large tidal range leads to strong tidal streams and high turbidity, producing communities characteristic of the extreme physical conditions of liquid mud and tide-swept sand and rock. Broad intertidal flats with areas of unstable sand and muddy flats support high densities of invertebrates. Intertidal rock platforms support a wide variety of invertebrate species. There are large areas of subtidal sand, rock and gravel with a variety of aquatic estuarine communities including *Sabellaria alveolata* reef. Areas of saltmarsh fringe the estuary, mostly grazed with a range of vegetation communities. There are gradual and stepped transitions between bare mudflat to upper marsh and grassland. Main vegetation types are: upper saltmarsh with *Festuca rubra* and *Juncus gerardii*; middle marsh dominated by *Puccinellia maritima* with *Glaux maritima* and *Triglochin maritima*; dense monocultures of *Spartina anglica* at the edge of the mudflats-brackish pools and depressions with *Phragmites australis* and *Bolboschoenus maritimus*.

Ecosystem services

21. Noteworthy flora:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Nationally important species occurring on the site.**Higher Plants.**

Aster linosyris (nationally rare),

Alopecurus bulbosus, *Althaea officinalis*, *Bupleurum tenuissimum*, *Hordeum marinum*, *Lepidium latifolium*, *Petroselinum segetum*, *Puccinellia rupestris*, *Trifolium squamosum*, *Zostera marina/angustifolia*, *Zostera noltei* (all nationally scarce)

22. Noteworthy fauna:

Provide additional information on particular species and why they are noteworthy (expanding as necessary on information provided in 12. Justification for the application of the Criteria) indicating, e.g. which species/communities are unique, rare, endangered or biogeographically important, etc., including count data. Do not include here taxonomic lists of species present – these may be supplied as supplementary information to the RIS.

Birds**Species currently occurring at levels of national importance:****Species regularly supported during the breeding season:**

Herring gull , *Larus argentatus argentatus*, NW 1540 apparently occupied nests, representing an average of 1.1% of the GB population (Seabird Europe and Iceland/W Europe) 2000 Census)

Species with peak counts in spring/autumn:

Little egret , <i>Egretta garzetta</i> , West Mediterranean	17 individuals, representing an average of 1% of the GB population (5 year peak mean 1998/9-2002/3)
Ruff , <i>Philomachus pugnax</i> , Europe/W Africa	12 individuals, representing an average of 1.7% of the GB population (5 year peak mean 1998/9-2002/3)
Whimbrel , <i>Numenius phaeopus</i> , Europe/Western Africa	333 individuals, representing an average of 11.1% of the GB population (5 year peak mean 1998/9-2002/3 - spring peak)
Eurasian curlew , <i>Numenius arquata arquata</i> , N. a. arquata Europe (breeding)	2021 individuals, representing an average of 1.3% of the GB population (5 year peak mean 1998/9-2002/3)
Common greenshank , <i>Tringa nebularia</i> , Europe/W Africa	26 individuals, representing an average of 4.3% of the GB population (5 year peak mean 1998/9-2002/3)
Species with peak counts in winter:	
Eurasian wigeon , <i>Anas penelope</i> , NW Europe	4658 individuals, representing an average of 1.1% of the GB population (5 year peak mean 1998/9-2002/3)
Northern shoveler , <i>Anas clypeata</i> , NW & C Europe	297 individuals, representing an average of 2% of the GB population (5 year peak mean 1998/9-2002/3)
Common pochard , <i>Aythya ferina</i> , NE & NW Europe	1118 individuals, representing an average of 1.8% of the GB population (5 year peak mean 1998/9-2002/3)
Water rail , <i>Rallus aquaticus</i> , Europe	11 individuals, representing an average of 2.4% of the GB population (5 year peak mean 1998/9-2002/3)
Spotted redshank , <i>Tringa erythropus</i> , Europe/W Africa	10 individuals, representing an average of 7.3% of the GB population (5 year peak mean 1998/9-2002/3)

Species Information

Species occurring at levels of international importance on the site.

Fish.

Alosa alosa (IUCN Red data book – threatened; Habitats Directive Annex II, Annex V (S1102)),
Alosa fallax (IUCN Red data book – threatened; Habitats Directive Annex II, Annex V (S1103))
Lampetra fluviatilis (IUCN Red data book – threatened; Habitats Directive Annex II (S1099)),
Petromyzon marinus (Habitats Directive Annex II (S1095))

Nationally important species occurring on the site.

Invertebrates.

Tenellia adspersa (nationally rare); *Corophium lacustre* (nationally scarce); *Gammarus insensibilis* (nationally scarce)

23. Social and cultural values:

Describe if the site has any general social and/or cultural values e.g. fisheries production, forestry, religious importance, archaeological sites, social relations with the wetland, etc. Distinguish between historical/archaeological/religious significance and current socio-economic values.

Aesthetic

Archaeological/historical site

Environmental education/ interpretation

Fisheries production
 Livestock grazing
 Non-consumptive recreation
 Scientific research
 Sport fishing
 Sport hunting
 Tourism
 Traditional cultural
 Transportation/navigation

b) Is the site considered of international importance for holding, in addition to relevant ecological values, examples of significant cultural values, whether material or non-material, linked to its origin, conservation and/or ecological functioning? **No**

If Yes, describe this importance under one or more of the following categories:

- i) sites which provide a model of wetland wise use, demonstrating the application of traditional knowledge and methods of management and use that maintain the ecological character of the wetland:
- ii) sites which have exceptional cultural traditions or records of former civilizations that have influenced the ecological character of the wetland:
- iii) sites where the ecological character of the wetland depends on the interaction with local communities or indigenous peoples:
- iv) sites where relevant non-material values such as sacred sites are present and their existence is strongly linked with the maintenance of the ecological character of the wetland:

24. Land tenure/ownership:

Ownership category	On-site	Off-site
Non-governmental organisation (NGO)	+	+
Local authority, municipality etc.	+	+
National/Crown Estate	+	
Private	+	+
Public/communal	+	+
Other	+	

25. Current land (including water) use:

Activity	On-site	Off-site
Nature conservation	+	+
Tourism	+	+
Recreation	+	+
Current scientific research	+	+
Fishing: commercial	+	+
Fishing: recreational/sport	+	+
Gathering of shellfish	+	
Bait collection	+	
Arable agriculture (unspecified)		+
Grazing (unspecified)	+	+
Permanent pastoral agriculture		+

Hunting: recreational/sport	+	+
Industrial water supply	+	
Industry	+	+
Sewage treatment/disposal	+	+
Harbour/port	+	+
Flood control	+	+
Mineral exploration (excl. hydrocarbons)	+	+
Mining/quarrying	+	+
Transport route	+	+
Urban development		+
Military activities	+	+

26. Factors (past, present or potential) adversely affecting the site's ecological character, including changes in land (including water) use and development projects:

Explanation of reporting category:

1. Those factors that are still operating, but it is unclear if they are under control, as there is a lag in showing the management or regulatory regime to be successful.
2. Those factors that are not currently being managed, or where the regulatory regime appears to have been ineffective so far.

NA = Not Applicable because no factors have been reported.

Adverse Factor Category	Reporting Category	Description of the problem (Newly reported Factors only)	On-Site	Off-Site	Major Impact?
Dredging	1		+	+	+
Erosion	1		+		+
Recreational/tourism disturbance (unspecified)	1		+	+	

For category 2 factors only.

What measures have been taken / are planned / regulatory processes invoked, to mitigate the effect of these factors?

Is the site subject to adverse ecological change? NO

27. Conservation measures taken:

List national category and legal status of protected areas, including boundary relationships with the Ramsar site; management practices; whether an officially approved management plan exists and whether it is being implemented.

Conservation measure	On-site	Off-site
Site/ Area of Special Scientific Interest (SSSI/ASSI)	+	+

National Nature Reserve (NNR)	+	
Special Protection Area (SPA)	+	
Land owned by a non-governmental organisation for nature conservation	+	+
Management agreement	+	+
Site management statement/plan implemented	+	
Other	+	
Management plan in preparation	+	+

b) Describe any other current management practices:

The management of Ramsar sites in the UK is determined by either a formal management plan or through other management planning processes, and is overseen by the relevant statutory conservation agency. Details of the precise management practises are given in these documents.

28. Conservation measures proposed but not yet implemented:

e.g. management plan in preparation; official proposal as a legally protected area, etc.

No information available

29. Current scientific research and facilities:

e.g. details of current research projects, including biodiversity monitoring; existence of a field research station, etc.

Contemporary.**Fauna.**

Numbers of migratory and wintering wildfowl and waders are monitored annually as part of the national Wetland Birds Survey (WeBS) organised by the British Trust for Ornithology, Wildfowl & Wetlands Trust, the Royal Society for the Protection of Birds and the Joint Nature Conservation Committee.

Wildfowl shooting monitoring. Returns received annually from Wildfowling Clubs.

Completed.**Flora and Fauna.**

CCW/EN Marine Intertidal Phase 1 survey of the biotopes of the Severn Estuary in 2003/4
BTO Research report 335 for CCW/EN (November 2003). Low tide distribution of waterbirds of Severn Estuary SPA. Results of 2002/03 WeBS low tide counts and a historical analysis (Burton *et al.* 2003).

WWT Wetlands Advisory Service. Report for CCW (April 2003). Baseline bird monitoring of the River Severn.

Joint Nature Conservation Committee (1997) Subtidal biotope survey at mouth of the River Parrett.

Joint Nature Conservation Committee (1997) Upper estuary intertidal rocky shore survey.

Mettam, C (1997) *Biotopes in the subtidal sandbanks of the Severn estuary*. Report to English Nature

30. Current communications, education and public awareness (CEPA) activities related to or benefiting the site:

e.g. visitor centre, observation hides and nature trails, information booklets, facilities for school visits, etc.

There are fixed interpretation panels and hides at Bridgwater Bay, Newport Wetlands Reserve, Flat Holm LNR and field centre. Interpretation boards at Black Rock.

31. Current recreation and tourism:

State if the wetland is used for recreation/tourism; indicate type(s) and their frequency/intensity.

Activities, Facilities provided and Seasonality.

Walking, dog walking, and birdwatching are concentrated along the sea walls all the year round and on the saltmarsh and sandy beaches.

Bathing, beach recreation, including sand yachting and wind surfing are practised on the sandy beaches, mainly in the summer.

There are boat clubs/marinas in the sub-estuaries with sailing, motor boats, and jet skiing. Angling is carried out from the shore and small boats. There is a certain amount of bait digging. Wildfowling is carried out from September to February all around the Estuary; consents and further management measures are being addressed. There are agreed refuge areas for the birds.

32. Jurisdiction:

Include territorial, e.g. state/region, and functional/sectoral, e.g. Dept. of Agriculture/Dept. of Environment, etc.
 Head, Natura 2000 and Ramsar Team, Department for Environment, Food and Rural Affairs,
 European Wildlife Division, Zone 1/07, Temple Quay House, 2 The Square, Temple Quay, Bristol,
 BS1 6EB
 Head, Countryside Division, Welsh Assembly Government, Cathays Park, Cardiff, CF1 3NQ

33. Management authority:

Provide the name and address of the local office(s) of the agency(ies) or organisation(s) directly responsible for managing the wetland. Wherever possible provide also the title and/or name of the person or persons in this office with responsibility for the wetland.

Site Designations Manager, English Nature, Sites and Surveillance Team, Northminster House,
 Northminster Road, Peterborough, PE1 1UA, UK / Site Safeguard Officer, International
 Designations, Countryside Council for Wales, Maes-y-Ffynnon, Penrhosgarnedd, Bangor,
 Gwynedd, LL57 2DW

34. Bibliographical references:

Scientific/technical references only. If biogeographic regionalisation scheme applied (see 15 above), list full reference citation for the scheme.

Site-relevant references

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EC Directive 79/409 on the Conservation of Wild Birds: Special Protection Area

SEVERN ESTUARY (GLOUCESTERSHIRE, AVON, SOMERSET, SOUTH GLAMORGAN,
MID GLAMORGAN, GWENT)

The Severn Estuary is one of the largest estuaries in Britain and it has the second largest tidal range in the world. Its classic funnel shape and south-west orientation makes it susceptible to extreme weather conditions in the east Atlantic. There are large urban developments on the estuary including the cities of Bristol and Cardiff.

The Severn Estuary qualifies under Article 4.1 of the Birds Directive by regularly supporting an internationally important wintering population of Bewick's swan *Cygnus columbianus bewickii*, an Annex 1 species. During the period 1988/89 to 1992/93 a mean peak of 289 birds (1.7% of the north-west European population, 4.1% of the British wintering population) used the estuary.

The Severn Estuary qualifies under Article 4.2 as a wetland of international importance by regularly supporting in winter over 20,000 waterfowl. In the five year period 1988/89 to 1992/93 the average peak count was 68,026 waterfowl comprising 17,502 wildfowl and 50,524 waders.

The Severn Estuary also qualifies under Article 4.2 by regularly supporting in winter internationally important numbers of the following 5 species of migratory waterfowl (average peak means for the period 1988/89 to 1992/93): 3,002 European white-fronted goose *Anser albifrons albifrons* (1.0% NW European, 50.0% British), 2,892 shelduck *Tadorna tadorna* (1.2% NW European, 3.9% British), 330 gadwall *Anas strepera* (2.8% NW European, 5.5% British), 41,683 dunlin *Calidris alpina* (2.9% east Atlantic flyway (EAF), 9.6% British) and 2,013 redshank *Tringa totanus* (1.3% EAF, 2.6% British).

The Severn Estuary also supports nationally important wintering populations of a further 10 species: 3,977 wigeon *Anas penelope* (1.6% British), 1,998 teal *Anas crecca* (2.0% British), 523 pintail *Anas acuta* (2.1% British), 1,686 pochard *Aythya ferina* (3.8% British), 913 tufted duck *Aythya fuligula* (1.5% British), 227 ringed plover *Charadrius hiaticula* (1.0% British), 781 grey plover *Pluvialis squatarola* (3.7% British), 3,096 curlew *Numenius arquata* (3.4% British), 246 whimbrel *N. phaeopus* (4.9% British total) and 3 spotted redshank *Tringa erythropus* (1.5% British).

In addition, during passage periods, the estuary supports nationally important numbers of ringed plover (spring migration: 442 birds (1.4% British passage), autumn migration: 1,573 birds (5.2% British passage)), dunlin (spring: 3,510 birds (1.7% British passage), autumn: 5,500 birds (2.7% British passage)), whimbrel *Numenius phaeopus* (spring: 246 birds (4.9% British passage), autumn: 66 birds (1.3% British passage)) and redshank (autumn: 2,456 birds (2% British passage)).

The Severn Estuary also supports a nationally important breeding population of a migratory species. In 1993 2040 pairs of lesser black-backed gulls *Larus fuscus* bred on the islands of Steep Holm and Flat Holm within the estuary. This represents 2.5% of the British total.

SPA Citation
CAR
December 1993

This citation / map relates to a site entered in
the Register of European sites for Great Britain.
Register reference number UK001502
Date of registration 25 AUG 1993
Signed [Signature]
on behalf of the Secretary of State for the Environment

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

SITE OF SPECIAL SCIENTIFIC INTEREST CITATION

WALES/ENGLAND

SEVERN ESTUARY

**MONMOUTHSHIRE/NEWPORT/CARDIFF/VALE OF GLAMORGAN
SOMERSET/GLOUCESTERSHIRE**

Date of Notification: 1952, 1976, 1989

National Grid Reference: ST 480830

O.S. Maps: 1:50,000 Sheet number: 162/171/172/182
1:25,000 Sheet number: ST 25-35/ST 26-36/ST 47-57/
ST 48-58/ST 49-59/ST 69-79/
ST 28-38/ST 17-27/ST 06-16/ST 60

Site area: 15950 (ha) (approx)

Description

The Severn Estuary lies on the south west coast of Britain at the mouth of four major rivers (the Severn, Wye, Usk and Avon) and many lesser rivers. The immense tidal range (the second highest in the world) and classic funnel shape make the Severn Estuary unique in Britain and very rare worldwide. The intertidal zone of mudflats, sand banks, rocky platforms and saltmarsh is one of the largest and most important in Britain. The estuarine fauna includes: internationally important populations of waterfowl; invertebrate populations of considerable interest; and large populations of migratory fish, including the nationally rare and endangered Allis Shad (*Alosa alosa*). The SSSI forms the major part of a larger area of estuarine habitat, which includes the Upper Severn Estuary, the Taf/Ely Estuary and Bridgwater Bay.

The estuary has a diverse geological setting and a wide range of geomorphological features, especially sediment deposits. It is important for the interpretation of coastline dynamics and land-forms, and also past changes, in sea level, sediment supply, climate and river flow. The estuary's overall interest depends on its large size, and on the processes and inter-relationships between the intertidal and marine habitats and its fauna.

Beds of eel-grass *Zostera spp* occur on the more sheltered mud and sand banks. The estuary fringes have large areas of saltmarsh. These are generally grazed by sheep and/or cattle, a significant factor determining the plant communities. A range of saltmarsh types is present, with both gradual and stepped transitions between bare mudflat and upper marsh. Glassworts *Salicornia spp* and Annual Sea-blite *Suaeda maritima* colonise bare mud on the lower saltmarshes, and disturbed areas at higher levels. Common Cord-grass *Spartina anglica* is abundant on the seaward fringes of marshes, where it occurs as dense monocultures, or with other species, such as Sea Aster *Aster tripolium*, Greater Sea-spurrey *Spergularia media* and Common Saltmarsh-grass *Puccinellia maritima*. The middle marsh is mainly dominated by Common Saltmarsh-grass, and frequent associates include Sea-milkwort *Glaux maritima*, English Scurvygrass *Cochlearia anglica* and Sea Arrowgrass *triglochin maritima*, together with two nationally scarce plants Bulbous Foxtail *Alopecurus bulbosus* and Slender Hare's-ear *Bupleurum tenuissimum*. There are a few localities for an uncommon middle marsh community, which is

characterised by Sea-lavendar *Limonium vulgare* and Thrift *Armeria maritima*. Prominent species on the upper marsh are Red Fescue *Festuca rubra* and Saltmarsh Rush *Juncus gerardi*. Nationally scarce species occurring on the upper marshes include Sea Clover *Trifolium squamosum* and Sea Barley *Hordeum marinum*. Highly saline drying pans on the upper marsh support a community with abundant Reflexed Saltmarsh-grass *Puccinellia distans* and Lesser Sea-spurrey *Spergularia marina*. The highest saltmarsh around the driftline is usually dominated by Sea Couch *Elymus pycnanthus*, with Spear-leaved Orache *Atriplex prostrata*. Some brackish pools and depressions on the upper marshes have small stands of Common Reed *Phragmites australis* or Sea Club-rush *Scirpus maritimus*. Corn Parsley *Petroselinum segetum*, a European rarity, occurs within the site.

The fluctuating salinity and highly mobile sediments with consequent high turbidity limits the benthic invertebrates to relatively few species. Those which are tolerant of such conditions occur in very high densities on the more stable mudflats. The most prominent species are ragworm *Nereis spp*, Lugwort *Arenicola marina*, Baltic Tellin *Mocoma balthica* and the spire shell *Hydrobia ulvae*. A greater variety of invertebrates tend to occur on the intertidal rock platforms, a more stable habitat with rock pools and a relatively high cover of seaweeds.

Seven species of migratory fish move through the Estuary between the sea and rivers. There are particularly large numbers of Atlantic Salmon *Salmo salar* and Common Eel *Anguilla anguilla*. The other species are Allis Shad, the nationally rare Twaite Shad *Alosa fallax*, the Sea Trout *Salmo trutta*, Sea Lamprey *Petromyzon marinus* and the Lampern or River Lamprey *Lampetra fluviatilis*.

The SSSI is of international importance for wintering and passage wading birds, with total winter populations averaging about 44,000 birds. Numbers can be considerably higher during severe winters when owing to its mild climate, the Severn supports wader populations that move in from the colder coasts of Britain. The SSSI holds most of the estuary's internationally important Curlew *Numenius arquata* and Redshank *Tringa totanus* populations, and most of its nationally important Ringed Plover *Charadrius hiaticula* and Grey Plover *Pluvialis squatarola* populations. Other waders which occur in significant numbers within the SSSI are Common Snipe *Gallinago gallinago*, Knot *Calidris canutus*, Whimbrel *Numenius phaeopus* and Turnstone *Arenaria interpres*. The SSSI is internationally important for Dunlin *Calidris alpina* and supports about 7.5% of the British wintering population of this species. The estuary as a whole supports about 10.5% of the British wintering population and is the single most important wintering ground of Dunlin in Britain.

In late winter and early spring the SSSI supports nationally important numbers of Shelduck *Tadorna tadorna*, following the partial dispersal from their moulting grounds in Bridgewater Bay. There are also significant numbers of Wigeon *Anas penelope*.

Remarks

The Severn Estuary SSSI forms part of a larger area which includes the Upper Severn Estuary SSSI and Bridgewater Bay SSSI. The larger area of the Severn Estuary is designated a Special Protection Area under the 'EEC Wild Birds Directive' and a Wetland of International Importance under the Ramsar Convention

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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

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- [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

Region 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	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, sediment
 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-lan>
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	