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Cefn Dryscoed DAF

Barn Owl Survey Report

January 2026

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Executive summary

Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake barn owl (*Tyto alba*) surveys to inform the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

A Preliminary Ecological Appraisal (PEA) undertaken by Mott MacDonald Bentley in September 2024 identified habitat suitable for barn owl within and adjacent to the Proposed Development (Mott MacDonald Bentley, 2026).

A review of biological records within 2.0km of the Proposed Development returned four historic records of barn owl (over 10 years old). The records relate to live sightings with no indication of nesting or roosting evidence for the species.

The field surveys were split into three stages in accordance with 'Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment' (Shawyer, 2011). One nest box was identified attached to the Lime Silo building within Cefn Dryscoed WTW. The nest box was precautionarily treated as an Occupied Breeding Site (OBS), due to the presence of fresh pellets and whitewashing. Barn owls are known to have bred within the box for a number of years, with site personnel reporting chicks falling from the box in previous seasons. It is considered likely that the combination of a build-up of pellets elevating the nesting position above the entrance and the sub-optimal box type has led to chicks falling from the box.

Due to the degraded condition of the nest box within the WTW, a licence was obtained from NRW to remove the box due to the health and safety risk the box posed to site personnel (located 13m high above a pedestrian walkway) and to benefit the species (licence to take a nest for the purpose of conservation and preserving public safety, licence number: S095887/1). Two new nest boxes were installed prior to the removal of the box (11 December 2025), one of which is located on the northern boundary of the WTW site.

Five other bird species, including house martin (*Delichon urbicum*), were identified nesting within the survey area, including within buildings in the WTW site. Recommendations in line with legislative and planning policy are summarised below:

- **Avoidance:** The works have been designed to avoid impacts to barn owl as far as possible. The works have been positioned to reduce impacts to nest boxes and minimise loss of trees.
- **Mitigation**: Working methods will be agreed at the appropriate stage but are likely to include:
  - No works should be undertaken at night to prevent disturbance to barn owl.
  - Where clearance of scrub or trees cannot be avoided, this should be undertaken outside of the core breeding season for birds (typically March to August inclusive). All vegetation clearance should be carried out under ecological supervision.
  - A temporary site compound will be installed within a pasture field to the south of Cefn Dryscoed WTW, over 100m away from the new nest boxes. All construction traffic, machinery and deliveries should be confined to this area, with no construction vehicles stored within 100m of the nest boxes. Construction traffic within Cefn Dryscoed WTW should be kept to a minimum and only equipment essential for the installation of pipework to the existing WTW should be taken into the site.

Opportunities for enhancement to benefit barn owl are provided within this report, including: installation of barn owl nest boxes to provide further nesting sites; tree planting; installation of nest boxes for other bird species; and review feasibility of reducing use of small mammal traps.

1 Introduction

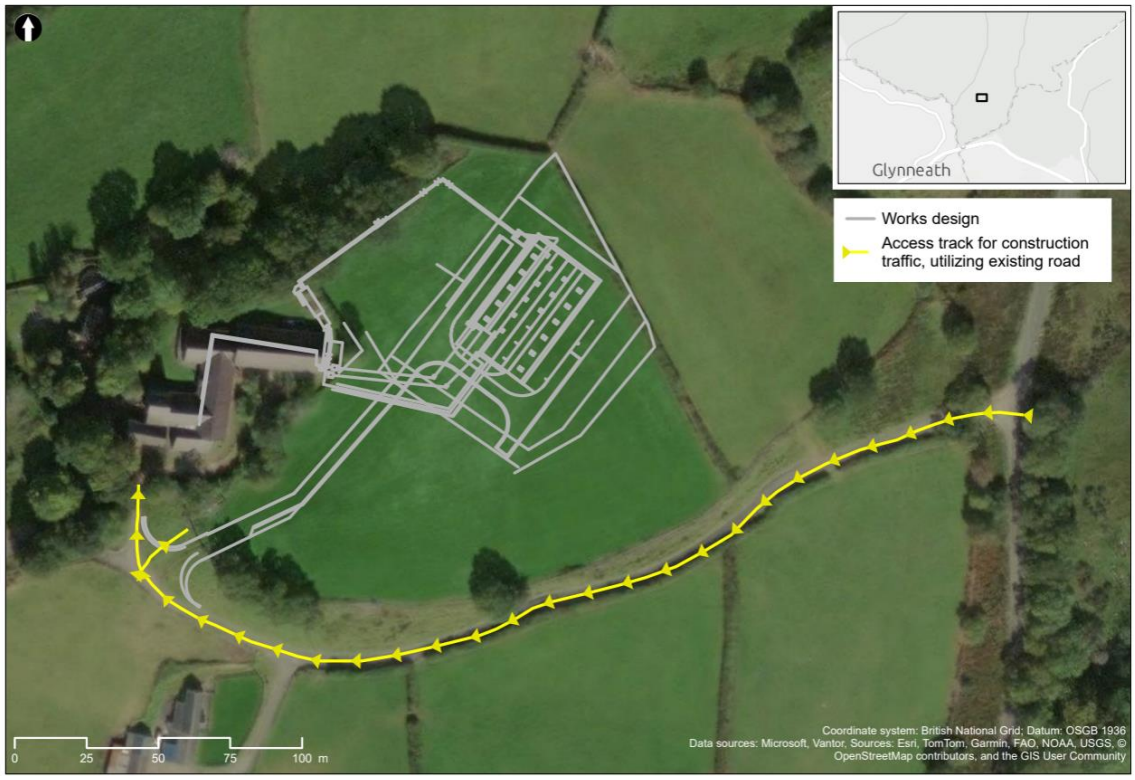
1.1 Background

Mott MacDonald Bentley has been commissioned by Dŵr Cymru Welsh Water (DCWW, the Applicant) to undertake barn owl (*Tyto alba*) surveys to inform the proposed improvement works at Cefn Dryscoed Water Treatment Works (WTW) (the 'Proposed Development').

The Proposed Development consist of the construction of a new Dissolved Air Floatation (DAF) building to reduce manganese levels and increase water quality at the site. The existing WTW site is located within the Brecon Beacons National Park and consists of a collection of stone buildings built to resemble a farmstead.

The Proposed Development is shown within Figure 1.1 below.

Figure 1.1: Proposed Development Layout



Source: Mott MacDonald Bentley, 2026

A Preliminary Ecologisal Appraisal (PEA) undertaken by Mott MacDonald Bentley in September 2024 identified habitat with the potential to support barn owl immediately adjacent to the Proposed Development (Mott MacDonald Bentley, 2026a). As such, further survey was recommended, forming the basis of this report.

1.2 Site Context and Proposed Development

Cefn Dryscoed WTW is located in a rural setting in the Brecon Beacons National Park, to the north of Pontneddfechan, Neath (National Grid Reference SN 9089 0943). The site is

immediately surrounded by pasture fields and hedgerows, with a parcel of ancient woodland to the north and moorland to the north east.

The design of the works has been informed by ecology survey results and advice, with impacts minimised as far as possible. The Proposed Development comprises of the following:

- The construction of a new DAF building, including the installation of three new DAF tanks and flocculators, and other processing and ancillary equipment within the new DAF building.
- Installation of pipelines to connect the new DAF building to the existing WTW and to connect the existing raw water main to the DAF plant. The pipelines will be installed by open-cut trenching with habitat mainly restored once complete, with the exception of re-planting mature tree species directly above the pipeline routes.
- Installation of a new access track to facilitate operational activities of the new DAF building.
- Replacement of existing and installation of new pumping equipment within Cefn Dryscoed WTW.
- Fencing and other soft-landscaping.
- Installation of new electrical cabling, distribution boards, project logic controller and instrumentation (e.g. water quality and turbidity monitors).
- Installation of a new DAF Motor Control Centre (MCC) within the new building.

1.3 Objectives

The objectives of the barn owl surveys and of this report are to:

- Undertake and present the results of a desk study to identify any existing information regarding barn owl and relevant designated sites.
- Undertake and present the results of field survey work, to identify the presence/likely absence of nesting barn owl.
- Outline any ecological constraints to the Proposed Development, in terms of presence of or suitability for breeding barn owl.
- Provide recommendations for further ecological survey work, if considered necessary, to inform an ecological baseline for the Proposed Development.
- Identify any high-level mitigation or compensation measures that may be required to offset potential development impacts.
- Identify opportunities for enhancement, in line with national and local planning policy.

1.4 Quality Assurance

All ecologists involved in the production of this report are members of the Chartered Institute of Ecology and Environmental Management (CIEEM) and are bound by its code of conduct (CIEEM, 2025). Additionally, this report has been subject to Mott MacDonald Bentley's internal quality assurance checks in line with ISO9001:2015.

All surveys and assessments were undertaken by suitably qualified and experienced ecologists as per CIEEMs competency framework (CIEEM, 2024) and have been undertaken with reference to the recommendations given in BS 42020:2013 Biodiversity: Code of practice for planning and development (British Standards Institute, 2013). In particular, experienced Mott MacDonald Bentley. ornithologists including those holding NRW barn owl licences inputted into the methods, interpretation and advice throughout the project and licensing stages.

In line with CIEEM (2019) guidance on the lifespan of ecological surveys, the barn owl survey results are considered valid for up to 12 to 18 months. Following this, the survey data should be

reviewed and, if appropriate, updated to ensure any assessment and mitigation approach remains valid.

2 Legislation and Policy

2.1 Legislation

Barn owls and their nests are fully protected under Schedule 1 of the Wildlife and Countryside Act 1981 (as amended) (henceforth referred to as 'the 1981 Act'), under which, it is an offence to:

- Intentionally kill, injure or take any wild bird.
- Intentionally take, damage or destroy the nest of any wild bird while it is in use or being built.
- Intentionally take or destroy the egg of any wild bird.
- Have in one's possession or control any wild bird, dead or alive, or any part of a wild bird, which has been taken in contravention of the 1981 Act or the Protection of Birds Act 1954.
- Have in one's possession or control any egg or part of an egg which has been taken in contravention of the 1981 Act or the Protection of Birds Act 1954.
- Use traps or similar items to kill, injure or take wild birds.
- Intentionally or recklessly disturb any wild bird listed on Schedule 1 while it is nest building, or at a nest containing eggs or young, or disturb the dependent young of such a bird.

2.2 Planning Policy

Under Chapter 6 of Planning Policy Wales 2024, planning authorities must seek to maintain and enhance biodiversity in the exercise of their functions, meaning that development proposals must provide a net benefit for biodiversity and should not cause significant loss of habitats and/or species. Therefore, development proposals must consider the need to:

- Support the conservation of native habitats and species, thus conserving biodiversity at a landscape scale and contributing to international responsibilities and obligations.
- Ensure that statutory and non-statutory designated sites are properly protected and managed.
- Safeguard protected and/or priority habitats and species from impacts which directly affect their nature conservation interests, compromise the resilience of ecological networks or the components which underpin them, such as water and soil, including peat deposits.
- Secure enhancement of and improvements to ecosystem resilience by improving diversity, condition, extent and connectivity of ecological networks.

At a local level, barn owl is listed within the Brecon Beacons Nature Recovery Action Plan (Brecon Beacons National Park Local Nature Partnership, 2019).

3 Methodology

3.1 Desk Study

A desk study was undertaken and reported within the Preliminary Ecological Appraisal Report (PEAR) to collate any barn owl records within 2.0km of the Proposed Development (Mott MacDonald Bentley, 2026a). Due to the low numbers of records returned, all historic records were considered including those older than 10 years.

The following sources were reviewed/consulted:

- Biodiversity Information Service for Powys & Brecon Beacons National Park (BIS)[1].
- Multi Agency Geographical Information for the Countryside (MAGIC) (https://magic.defra.gov.uk).
- Natural Resources Wales (NRW) (https://naturalresources.wales).
- Joint Nature Conservation Committee (JNCC) (https://jncc.gov.uk).

3.2 Identification of Survey Areas and Scope

Habitat with the potential to support barn owl was identified immediately adjacent to the Proposed Development during the Preliminary Ecological Appraisal (PEA) (Mott MacDonald Bentley, 2026a). Including buildings, a nest box, mature trees, pasture fields and woodland edge habitats. As such, further survey work was recommended.

Based on the design of the Proposed Development shown within Figure 1.1, the scope of surveys described within Table 3.1 below is considered appropriate to inform an Ecological Impact Assessment (EcIA) and mitigation requirements.

Table 3.1: Zone of Influence and Survey Scope

Zone of Influence (ZoI)	Survey Scope and Rationale
All suitable habitat that could be impacted by the Proposed Development (at least 30m)	• Ground level assessments of all trees and structures that could be impacted by the Proposed Development, to identify any potential nest sites for barn owl. • Field surveys to characterise all potential nest sites that could be impacted by the Proposed Development. Presence/likely absence surveys were undertaken of a wider area to inform the design of the Proposed Development. As such, the survey area was variable but covers at least 30m around the Proposed Development and includes all tree lines and buildings likely to be impacted. No significant loss of foraging habitat is anticipated as a result of the Proposed Development. As such, an assessment of the habitat suitability for foraging and commuting has not been undertaken.

Source: Mott MacDonald Bentley, 2026

The survey area is shown by a dashed blue line within Appendix A.

3.3 Barn Owl Field Survey Methodology

The field surveys were split into three stages in accordance with 'Barn Owl *Tyto alba* Survey Methodology and Techniques for use in Ecological Assessment' (Shawyer, 2011). Field surveys

[1] Biological records were obtained in February 2025. The reference numbers are included within Section 6.

were undertaken on 17 and 18 March 2025 with all three surveys stages conducted during this time period.

3.3.1 Stage 1 Survey – Suitability Assessment

A walkover survey was undertaken within the ZoI during daylight hours to broadly define those habitat features of potential value to barn owls (e.g. buildings, trees, nest boxes etc.). Only trees with the following diameters were considered suitable, unless premature decay or otherwise suitable features to support nesting barn owl were observed:

- Ash (*Fraxinus excelsior*), sycamore (*Acer pseudoplatanus*) and crack willow (*Salix fragilis*): 0.5m diameter or more (>80 years old).
- Horse chestnut (*Aesculus hippocastanum*) and beech (*Fagus sylvatica*): 0.75m diameter or more (>150 years old).
- Oak (*Quercus* sp.): 1.5m diameter or more (>250 years old).

3.3.2 Stage 2 – Investigative Field Survey

The Stage 2 survey involved the careful inspection of built structures, mature trees or other features identified in the Stage 1 surveys. The surveys were carried out by a NRW licensed barn owl surveyor, to determine whether they offer opportunities as a:

- Potential Nest Site (PNS) ‑ features identified as having suitable size and structure for barn owls to nest within (e.g. a cavity within a tree).
- Active Roost Site (ARS) ‑ a roost site that is not used by barn owl for breeding, but where evidence of barn owl activity has been observed (e.g. pellets and/ or moulted feathers).
- Temporary Rest Site (TRS) ‑ a temporary resting place such as a tree, building or fence post, where evidence of milky white droppings and/or pellets have been observed.

Table 3.2 below gives further detail of these definitions.

3.3.3 Stage 3 – Nest Verification Survey

Stage 3 involved a survey to confirm whether PNS or ARS identified during Stage 2 were actively used by barn owl for breeding. This survey was undertaken by a NRW licensed barn owl surveyor. This survey was conducted externally using a pole-mounted video inspection camera. Barn owl can be prone to nest desertion during the early phase of breeding. The Stage 3 survey aimed to minimise disturbance and the camera was positioned for a short period outside of the nest box opening by the NRW licensed barn owl surveyor. All noise was kept to a minimum. The camera was not moved inside of the nest box.

- Sites with confirmed breeding barn owl are hereby referred to as ‘Occupied Breeding Sites’ (OBS).

In addition to the descriptions above, the definitions of barn owl roosting and nesting types described in survey Stages 1 to 3 are summarised in Table 3.2.

Table 3.2: Definitions of roosting/ nesting sites

Barn owl roost/ nest types	Signs of use/ description
Occupied breeding site (OBS)	Cavities or chambers where breeding was taking place or where it had done so in the recent past determined via the presence of adult barn owls, their moulted feathers, pellets, eggs, eggshell, chicks or down. The presence of blowflies around the entrance of a potential nest site which are attracted by food remains within the nest can also be indicative of an occupied breeding site.
Potential nest site (PNS)	Cavities or chambers of a suitable size and structure to provide a suitable barn owl nest site (80mm diameter; (about tennis ball size) or vertical slot of this width backed by a sufficiently large and dark chamber with a floor area greater than 250mm x 250mm).
Active roost site (ARS)	A place at which breeding does not occur but where a barn owl is seen or heard regularly, or its current or recent presence (last 12 months) can be recognised by signs of whitewash, pellets and moulted feathers. Unlike nest sites they can sometimes occur quite close to the ground and often in open-fronted well-lit buildings.
Temporary rest site (TRS)	Small spots of thick, chalky cream-coloured droppings that can often be seen underneath a tree, in a building or on a fence post and which are sometimes accompanied by an occasional pellet or body feather, can indicate a temporary night-time stopping-off place of a barn owl.
No barn owl roosting/ nesting potential identified	No suitable supporting habitat such as cavities, chambers or perches identified nor evidence of barn owl.

Source: Shawyer (2011)

3.4 Limitations

3.4.1 Desk Study and Field Survey Limitations

Biological records obtained from third parties do not represent a full and complete species list for the area, not all areas within the biological records search area have been surveyed so lack of records does not represent a lack of species present. They are mostly given by individuals on an *ad-hoc* basis, often meaning there are areas of deficiency in the data. If records of a particular species are not returned it may be as a result of the area being under surveyed opposed to an indication of the absence of that species. Therefore, a species should not be disregarded on this basis alone.

A build-up of pellets and debris restricted the inspection surveys of the nest box attached to the Lime Silo building using a pole-mounted video inspection camera. The interior of the box could not be viewed in its entirety. However, an inspection of the interior of the box at height revealed no additional evidence of barn owl and confirmed previous assessments. As such, this is not considered a limitation.

4 Results

4.1 Desk Study Results

A summary of the desk study results is included within Table 4.1 below.

Table 4.1: Desk Study Results Summary

Feature	Description
Designated sites within 2.0km	No sites identifying barn owl in the citation were returned within 2.0km of the Proposed Development.
Records of barn owl within 2.0km	In total, four historical records of barn owl were returned from within 2.0km of the Proposed Development and none fall within its footprint. No records date from within the last 10 years (2015 to 2025). The nearest record is from 0.47km to the north-west, over the River Neath, dated 1972. The remaining records are from 2005 with two records from Cefn Uchaf Farm and one from Ton y Gilfach Farm, Glynneath. The records relate to live sightings of the species and give no indication of nesting, roosting or resting sites.
Species Status	Barn owl is widely distributed throughout the UK, primarily within areas of lowland farmland. The species has declined in numbers over the last century, with a dramatic decline in the 1970's and 1980's. This decline is attributed to the loss of suitable roosting sites and rough grassland habitat, decline in prey numbers and road deaths. The last national survey was carried out between 1994 and 1997 estimating the UK populations to be c. 4000 breeding pairs (The Barn Owl Trust, 2025; Musgrove *et al*., 2013). However, the population has since recovered and is now thought to exceed 10,000 breeding pairs due to the increase of nest boxes available, with 25% of the population now using them to breed (British Trust for Ornithology, 2025). Barn owl are classified in Wales as Green under the Birds of Conservation Concern 5: the Red List for Birds (2021) as well as under the Birds of Conservation Concern Wales 4: the population status of birds in Wales (Johnstone *et al.,* 2022) indicating that this species is not currently considered to be in decline or at risk at a population level nationally.

Source: Mott MacDonald Bentley, 2026; BIS, 2025

4.2 Barn Owl Survey Results

4.2.1 Stage 1 – Onsite Scoping Survey

The Stage 1 survey identified the following structures with potential to provide suitable features for barn owl:

- One building (the Filter House).
- One barn owl nest box (attached to the Lime Silo building)

Subsequently both the building and the nest box were scoped in for further survey, in the form of Stage 2 detailed inspection surveys. The locations of the building and the nest box are shown within Appendix A with a description, including photograph of each provided within Appendix B.

No trees were identified within the survey area with suitable features to support nesting/roosting barn owl.

4.2.2 Stage 2 – Investigative Field Survey

A Stage 2 survey of the Filter House building and nest box was undertaken on 18 March 2025. The results are described below.

Filter House

An arrow-slit window on the western side of the building appeared to be open, possibly providing access to the internal space of the building. Following internal inspection this window was in fact shown to be blocked to barn owl access by tightly positioned horizontal slats providing insufficient dimensions for barn owl access. However, it was clear that there must be a level of access into the building's internal area given that bird droppings, considered likely to be jackdaw (*Corvus monedula*), were identified on metal safety railings.

Upon internal inspection, the building was considered generally unsuitable for nesting barn owl being well-lit throughout the day, experiencing regular human presence plus constant noise from pumping and electrical equipment.

No evidence of barn owl was identified nor any suitable nesting features within the building.

Nest Box

The barn owl nest box was investigated from ground level. The box is located on the southern wall of the Lime Silo building. It is positioned in a sheltered location beneath the roof of an open lean-to structure in proximity to several metal roof beams and is approximately 13m off the ground. As the box is located within an operational WTW, it is subject to a degree of regular disturbance from human presence, equipment noise and disturbance from tanker deliveries immediately adjacent to the Lime Silo building.

The nest box was considered to provide the necessary features and dimensions for a PNS during the Stage 2 survey in accordance with Shawyer (2011). As such, it was scoped in for further survey.

4.2.3 Stage 3 – Nest Site Verification Survey

Nest Box

A Stage 3 survey of the nest box was undertaken on 18 March 2025 by an NRW licensed barn owl surveyor.

The following evidence of barn owl was identified in the immediate vicinity of the nest box:

- 19 barn owl pellets were identified. Five of these were assessed as being less than 1 month old. The other pellets were assessed as ranging between approximately 2 to 24 months old.
- 'Whitewashing', of a type consistent with barn owl, was identified on the floor beneath the nest box, on nearby guttering; and also visible on the platform of the nest box itself.
- As set out previously, anecdotal evidence was provided by DCWW site personnel of the box being used as a breeding site for several years. This included sightings of adults and juveniles during the previous breeding season. Chicks have also fallen from the box in previous years, with the RSPB attending site to take the chicks into care. Site personnel also mentioned the regular presence of an adult near the nest box in recent weeks and over the winter.
- The use of an extendable pole-mounted camera revealed that the nest box was full of pellets and debris, cluttering the inside and entrance to the box. The box had begun to come away from the wall due to the weight of the material inside. Due to the build-up of pellets the interior of the box could not be viewed fully to search for any chicks, eggs, juvenile down or any other evidence inside such as nest debris.

Night-time bat emergence surveys were undertaken throughout the summer months of 2025 (Mott MacDonald Bentley, 2026b). Incidental observations obtained during night-time surveys noted the first sighting of a barn owl pair at the site on 17 July 2025. One barn owl was recorded entering the box on the 17 July 2025.

The outcome of the Stage 3 survey is that the nest box should be regarded precautionarily as an OBS given the amount of whitewashing and pellets (some relatively fresh) in the immediate vicinity. The accumulation of pellets at the nest box entrance is considered fairly indicative that it has been used for breeding, alongside the anecdotal sightings of barn owls reported by the site personnel. The nest box is also considered likely to be an ARS outside periods of nesting.

The nest box was installed approximately 30 years ago, when the WTW was built. The entrance to the box is low down and is considered sub-optimal for barn owl. It is considered likely that the combination of a build-up of pellets elevating the nesting position above the entrance and the sub-optimal box type has led to chicks falling from the box in previous years.

The results are summarised in Table 4.2.

Table 4.2: Nesting/Roosting Barn Owl Results Summary

Feature ID	Stage 1	Stage 2	Stage 3	Barn Owl Suitability Assessment	Comments
Filter house	17/03/2025 Walkover survey, Scoped in for Stage 2 survey	18/03/2025 No barn owl potential/evidence. Scoped out.	Not required	No barn owl roosting/nesting potential identified	-
Barn owl nest box	17/03/2025 Walkover survey, Scoped in for Stage 2 survey	18/03/2025 PNS (Potential Nest Site) Scoped in for Stage 3 survey	18/03/2025 Precautionarily treated as OBS (Occupied Breeding Site)	OBS	Also likely to be an ARS (Active Roost site), outside of breeding periods

Source: Mott MacDonald Bentley, 2026

4.3 Licensing

Due to the degraded condition of the nest box within the WTW, a licence was obtained from NRW to remove the box both due to the health and safety risk the box posed and to benefit the species (licence to take a nest for the purpose of conservation and preserving public safety, licence number: S095887/1; granted on 28 October 2025).

The barn owl box was located approximately 13m high above a pedestrian walkway and doorway that is in use by site personnel. As the box was full of nest debris and pellets and had started to come away from the wall of the Lime Silo building, it posed a health and safety risk to site personnel. In addition, the box needed to be replaced for the benefit of the birds to prevent future broods falling from the box. The position of the box is shown within Figure 4.1 below.

Figure 4.1: Old Barn Owl Nest Box Location

Source: Mott Macdonald Bentley, 2026

An additional box check was carried out on 22 October 2025 to inform this licence application. The survey identified evidence of occasional use of the box by barn owl. No evidence of breeding was identified, with no eggs or chicks observed. It is considered likely that the box had not been used for breeding in 2025 but is being used occasionally by barn owl.

Two new nest boxes were installed on 11 December 2025, prior to the removal of the existing box (The Barn Owl Trust nest boxes for trees were installed). The locations of the two new nest boxes are shown within Figure 4.2 below. The nest boxes were installed on trees under the supervision of an NRW licenced barn owl surveyor and a licensee named on the NRW licence. Following the installation of the two new boxes, the old box was inspected at height by an NRW licence surveyor prior to it being removed (no evidence of breeding barn owl was observed, with no barn owls present).

Figure 4.2: New Barn Owl Nest Box Locations

Source: Mott MacDonald Bentley, 2026

Annual monitoring surveys will be undertaken of the new nest boxes for three years as part of this licence, the first of which is scheduled for August 2026.

4.4 Incidental Bird Evidence

During the barn owl surveys evidence of a further 21 species of bird was recorded incidentally in March 2025.

A total of 36 bird nests were recorded within the survey area. The majority of these (29), were identified as house martin (*Delichon urbicum)* nests, located mostly under the roof eaves and widely distributed across the majority of the site buildings. The nests appeared inactive during the barn owl surveys. However, house martins are known to show loyalty to their breeding site locations, returning in April and it is considered likely that these migratory birds had not yet returned to the site in March 2025.

Nests likely relating to five further bird species were identified and the results are summarised below in Table 4.3. The table shows which of the identified species are afforded additional legal protections during breeding, under Schedule 1 of the 1981 Act. It also notes which birds are listed as Priority Species under Section 7 of the 2016 Act. The nest locations are shown in Appendix A.

Table 4.3: Incidental Bird Evidence

Species	Nesting Evidence	Nesting Location	Other evidence	Schedule 1 and/or Section 7 listings
Blackbird (*Turdus merula*)	No	N/A	Sightings	No
Blue tit (*Cyanistes caeruleus*)	No	N/A	Sightings/ calling	No
Coal tit (*Periparus ater*)	No	N/A	Sightings/ calling	No
Dunnock (*Prunella modularis*)	No	N/A	Sightings/ calling	Section 7
Goldcrest *(Regulus regulus*)	No	N/A	Calling	No
Goldfinch (*Carduelis carduelis*)	No	N/A	Sightings/ calling	No
Great spotted woodpecker (*Dendrocopos major*)	No	N/A	Calling	No
House martin (*Delichon urbicum*)	At least 29 nests identified (inactive at time of survey)	Most site buildings including: ● Filter house; ● Control house; ● Main chemical store and offices; ● Lime silo (including outbuildings); ● Chemical store; and ● Centrifuge buildings	Remains of 1 dead house martin chick identified adjacent to a nest. The remains are skeletal, from a previous year's brood.	No
House sparrow (*Passer domesticus*)	No	N/A	Sightings/ calling	Section 7
Jackdaw (*Coloeus monedula*)	1 nesting colony identified (active at time of survey)	Filter house in a small gap in the wall beneath the fascia board with edge of nest visible (SE building corner)	Sightings/ calling; Small area of droppings identified on metal railings within filter house.	No
Jay (*Garrulus glandarius*)	No	N/A	Calling	No
Meadow pipit (*Anthus pratensis*)	No	N/A	Sightings/ calling	No
Mistle thrush (*Turdus viscivorus*)	No	N/A	Calling	No
Nuthatch (*Sitta europaea*)	No	N/A	Sightings/ calling	No
Red kite (*Milvus milvus*)	No	N/A	Sightings	Schedule 1
Redwing (*Turdus iliacus*)	No	N/A	Sightings	Schedule 1
Robin (*Erithacus rubecula*)	1 nest identified (inactive at time of survey)	Filter house at base of arrow-slit window (east side)	Sightings/ calling	No
Starling (*Sturnus vulgaris)*	No	N/A	Sightings/ calling	Section 7

Species	Nesting Evidence	Nesting Location	Other evidence	Schedule 1 and/or Section 7 listings
Swallow (*Hirundo rustica)*	2 potential nest sites (inactive at time of survey)	Lime silo under roofs of lean-to outbuildings (north and south sides)	N/A	No
Swift (*Apus apus*)	1 swift box identified (inactive at time of survey)	Control house under eaves (north side)	N/A	No
Wren (*Troglodytes troglodytes*)	2 potential nest sites identified (inactive at time of survey)	Entrance and amenity both nests concealed within common ivy (*Hedera helix*) on the building wall. (south side)	Sightings/ calling	No

Source: Mott MacDonald Bentley, 2026

5 Conclusions

5.1 Conclusion

Barn owl were found to be using Cefn Dryscoed WTW during the surveys. An existing nest box within the WTW was characterised as an OBS and ARS with evidence of use by nesting barn owl identified. Chicks are known to have fallen from the box in previous years, likely due to the position of the entrance and build-up of pellets elevating the nesting position above the entrance.

The box posed a health and safety risk to site personnel due to its degraded condition as it had begun to come away from the wall of the Lime Silo building. The box was therefore removed under an NRW licence and two new boxes installed in December 2025, one of which is located on the north west boundary of the WTW site.

Other nesting birds were noted incidentally within the survey area. The site is likely used yearly by a colony of nesting house martin during their breeding season, with at least 29 nests widely distributed across site buildings. An active jackdaw nest was also identified on the southeast corner of the Filter House with evidence of jackdaw also recorded inside the building. Nests belonging to other bird species were also identified in small numbers within the site buildings including, potential robin, wren, swallow and swift nests. A number of other birds were also recorded in the vicinity from sightings or songs/ calls (as listed in Table 4.3).

5.2 Recommendations

It is anticipated that full mitigation and enhancement measures will be laid out within an Ecological Impact Assessment (EcIA). However, based on the assessment of effects and current proposals it is anticipated that any mitigation strategy would include the measures laid out within the following sections, to comply with legislation and planning requirements.

5.2.1 Avoidance, Mitigation and Works Design

The works have been designed to avoid impacts to barn owl as far as possible. The works have been located positioned to reduce impacts to nest boxes and minimise loss of trees.

No significant construction activities are anticipated within 100m of the new nest boxes. Minor works will be undertaken approximately 70m to 90m away, inside the Main WTW building. These works consist of the replacement of existing electrical and pumping equipment and are considered unlikely to cause disturbance to barn owl using the boxes. All other construction works are located to the south east of Cefn Dryscoed WTW over 100m away from the new nest boxes, with the existing buildings sheltering the nest box to the north west from visual and noise disturbance. The works are also elevated above the position of the nest box to the north west, providing further shelter for the birds, should they be using the box at the time of works.

In terms of other bird species, the Proposed Development will result in the loss of grassland. Clearance of a small number of trees/scrub may also be required in order to facilitate the connection of pipes from the new DAF building to the existing WTW.

It is anticipated that working methods will be agreed at the appropriate stage, but are likely to include the following to reduce impacts on barn owl and other bird species:

Timing of Works

- No works should be undertaken at night to prevent disturbance to barn owl, which are a nocturnal species that hunt across grasslands at night.

- Where clearance of scrub or trees cannot be avoided, this should be undertaken outside of the core breeding season for birds (typically March to August inclusive). All vegetation clearance should be carried out under ecological supervision to ensure nesting birds are not impacted by the works (regardless of the timing of works as birds can breed all year round).
- As far as possible, works within Cefn Dryscoed WTW should be undertaken outside of the core breeding season for birds to prevent disturbance to the species using the existing buildings to nest (typically March to August inclusive).
- Consideration also needs to be given to any mitigation for bats which may affect timing recommendations.

Nest Site Disturbance Buffer

- A temporary site compound will be installed within a pasture field to the south of Cefn Dryscoed WTW, over 100m away from the new nest boxes. All construction traffic, machinery and deliveries should be confined to this area, with no construction vehicles stored within 100m of the nest boxes. Construction traffic within Cefn Dryscoed WTW should be kept to a minimum and only equipment essential for the installation of pipework to the existing WTW should be taken into the site.
- If any additional barn owl nest sites, or dependant young are discovered within vicinity of the Proposed Development, then construction activities must stop immediately, and advice should be sought from an ornithologist.

5.2.2 Opportunities for Enhancement

Section 6 of the Environment (Wales) Act 2016 requires new development to maintain and enhance biodiversity and promote resilience of ecosystems. On this basis, and in line with national and local planning policy objectives, development in Wales should deliver net benefits for biodiversity in ways that enhance ecosystem resilience. It is recommended that advice is sought from an ecologist to review opportunities for biodiversity enhancement in a holistic manner across the scheme as a whole.

Opportunities for enhancement to benefit barn owl and other nesting birds have been highlighted below:

- Provision of additional barn owl nest boxes in areas of suitable habitat, *i.e.* sheltered areas overlooking rough grassland and away from major roads or electricity lines (Ramsden, 2003). If suitable locations for nest box installation cannot be incorporated into the design of the Proposed Development, consultation with NRW and the Local Planning Authority could be undertaken to identify suitable locations in adjacent land parcels. An ornithologist should advise as to the specification of the owl boxes.
- Tree planting to maximise the likelihood for future veteran trees to provide suitable habitat for barn owl in the long term. This could be achieved by planting appropriate oak species trees (likely *Quercus petraea*) from locally sourced acorn/sapling stock.
- It is recommended that small mammal traps are removed from the WTW site and are disposed of appropriately. Poisonous substances may cause harm/ pose a risk to barn owl particularly when targeting their prey species. Traps without poison (preferably humane) should be used instead and only where it is considered essential to use them.
- Provision of nest boxes to benefit a range of breeding bird species, to be installed following the completion of the works. Particularly for bird species already identified nesting on the buildings or present in the vicinity. For example:
  - Open fronted boxes for wren, robin and blackbird.
  - Small entrance hole bird boxes for house sparrows, blue tit, coal tit, house sparrow and nuthatch.

– Specialist nest boxes could be installed in the new building for house martin, swift and swallow.

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Appendices

A. Survey Results Plan

Works design

Access track for construction traffic, utilizing existing road

Barn owl evidence

Occupied Breeding Site (OBS) Potential nest site

Incidental bird species evidence

- House martin
- House martin (potential)
- House martin or barn swallow
- House martin or swallow
- Jackdaw
- Jackdaw/ other bird sp.
- Robin nest (potential)
- Swift (potential) / other bird
- Wren (potential)

Coordinate system: British National Grid; Datum: OSGB 1936

Microsoft, Vantor, Sources: Esri, TomTom, Garmin, FAO, NOAA, USGS, © OpenStreetMap contributors, and the GIS User Community
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Barn Owl Survey Results

Drawn	GIS Checked	Checked	Approved
K Toth	**S Baldwin**	**A Davies**	**LW**
Scale at A3 **1:1,500**	Status **INF**	Revision **01**	Security **STD**

0 20 40 60 80 Metres

B17545-123532-14-XX-SU-NA-EI0051

B. Barn Owl Stages 1 to 3 Survey Results

Table B.1: Barn Owl Survey Results – Structures

Structure ID	Barn Owl Suitability Assessment	Description	Photographs
Filter house	No barn owl roosting/ nesting potential identified	The building is a two-storey operational structure, resembling an agricultural building from the outside. At Stage 1 Survey for barn owls, an arrow-slit window on the western side of the building had appeared to be open. It was considered that this may possibly provide access to the internal space of the building, when seen from the outside.	
		Following internal inspection at Stage 2 Survey the arrow-slit window was in fact shown to be blocked to barn owl access by tightly positioned horizontal slats providing insufficient dimensions for barn owl access. The building is well-lit internally throughout the day, experiencing regular human presence plus constant noise from pumping and electrical equipment. No evidence of barn owl was identified nor any suitable nesting features within the building.	
Barn owl nest box	Precautionarily treated as: OBS (Occupied Breeding Site); and Likely an ARS (Active Roost Site) outside of breeding periods.	A barn owl nest box was identified at Stage 1 Survey located on the southern wall of the Lime Silo building. It is positioned in a sheltered location beneath the roof of an open lean-to structure and in proximity to several metal roof beams. At Stage 2 Survey this nest box was considered to provide the necessary features and dimensions for a potential nest site (PNS).	

Structure ID	Barn Owl Suitability Assessment	Description	Photographs
			
		At Stage 3 Survey, 19 barn owl pellets (including 5 relatively fresh) were identified approximately beneath the nest box	
		At Stage 3 Survey, whitewashing was also identified on the ground beneath the nest box, on adjacent guttering and on the nest box platform.	
			

Structure ID	Barn Owl Suitability Assessment	Description	Photographs
			
		Stage 3 Survey revealed that the nest box entrance is cluttered with what appeared to be a build-up of pellets in a pile. The outcome of the Stage 3 survey is that the nest box should be regarded precautionarily as an Occupied Breeding Site (OBS). The nest box is also considered likely to revert to an Active Roost Site (ARS) outside of periods of nesting.	

Source: Mott MacDonald Bentley, 2026