HORIZON NUCLEAR POWER

WYLFA NEWYDD

ENERGY WORKING FOR BRITAIN

Wylfa Newydd Project

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9 Terrestrial and freshwater ecology

9.1 Introduction

9.1.1 This chapter describes the assessment of potential terrestrial and freshwater ecology effects resulting from the construction, operation and decommissioning of the Logistics Centre at Parc Cybi (hereafter referred to as the 'Logistics Centre').

9.1.2 Please refer to chapter B9 (terrestrial and freshwater ecology) (Application Reference Number: 6.2.9) for the technical basis for the assessment including a summary of legislation, policy and guidance; key points arising in consultation that have guided the terrestrial and freshwater ecology assessment; and assessment methodologies and criteria.

9.1.3 This chapter should be read in conjunction with appendix H9-1 (Parc Cybi - Phase 1 Habitat Survey) (Application Reference Number: 6.8.17), and appendix H9-2 (Protected and Legally Controlled Species Compliance Report) (Application Reference Number: 6.8.18), which discuss species protected by UK legislation (including breeding birds; reptiles; water vole (*Arvicola amphibius*); and invasive non-native species of plant) and the legal implications of the proposed development on these species.

9.1.4 Effects from proposed developments can arise from direct and indirect impacts upon habitats or species, and be of a temporary or permanent nature. As indirect effects can occur through changes in hydrology, pollution of air and water, and via noise, this chapter is supported by information from the relevant chapters of the Environmental Statement. Where necessary, cross-reference to information in other chapters is provided.

9.2 Study area

9.2.1 This section describes the study areas relevant to the terrestrial and freshwater ecology assessment for the Logistics Centre.

9.2.2 The study area for the desk study was a 2km radius from the Logistics Centre for legally protected species and designated sites (statutory and non-statutory) of nature conservation importance (figure H9-1, Application Reference Number: 6.8.29). This search area was based on professional judgement and good practice guidelines and was considered to be sufficient to account for the majority of ecological receptors that would be potentially vulnerable to effects arising from construction, operation and decommissioning activities within the Logistics Centre. This took into account the zones of influence relevant to other disciplines such as air quality (chapter H5, Application Reference Number: 6.8.5) and surface water and groundwater (chapter H8, Application Reference Number: 6.8.8).

9.2.3 The field survey study area for the Logistics Centre included the areas within the boundary of the Logistics Centre, and land immediately adjacent to this, and an assessment of all ponds within 500m of the site boundary (appendix H9-1, Application Reference Number: 6.8.17; and appendix H9-3, Logistics

Centre Extended Phase 1 Habitat Survey and eDNA Report, Application Reference Number: 6.8.19).

9.3 Baseline environment

9.3.1 This section provides a summary of the baseline conditions for terrestrial and freshwater ecology within the study area described in section 9.2. Receptors have been valued according to the methodology and criteria described in chapter B9 (Application Reference Number: 6.2.9).

Statutory and non-statutory designated sites

9.3.2 The Logistics Centre would not impinge upon any statutory or non-statutory designated site. The following statutory sites were recorded within the desk study area and are shown on figure H9-1 (Application Reference Number: 6.8.29).

- North Anglesey Marine/Gogledd Môn Forol candidate Special Area of Conservation (cSAC): A 3,249.5km^2 site, approximately 0.85km north of the Logistics Centre at its closest point, submitted to the European Commission for designation for the Annex II species harbour porpoise (*Phocoena phocoena*).
- Anglesey Terns/Morwenoliaid Ynys Môn Special Protection Area (SPA): A 1,019.31km^2 site, approximately 1.2km north of the boundary of the Logistics Centre at its closest point, designated for the Annex I species Arctic tern (*Sterna paradisaea*), common tern (*Sterna hirundo*), roseate tern (*Sterna dougallii*) and Sandwich tern (*Sterna sandvicensis*).
- Beddmanarch-Cymyran Site of Special Scientific Interest (SSSI): A 911.0ha site, approximately 1.1km east of the Logistics Centre at its closest point. The site consists of a coastal area of sandbank, mudflat and saltmarsh, as well as two stands of dune heath. All three species of eelgrass (*Zostera* spp.) have been recorded and it supports a variety of over-wintering bird species.

9.3.3 The following non-statutory designated sites have been recorded within the study area:

- Arfordir Bwth Corwgl – Bae Trearddur (A11) Isle of Anglesey County Council (IACC) Wildlife Site, approximately 1.65km to the south-west of the Logistics Centre at its closest point. This site comprises a strip of rocky coastland with a mosaic of coastal grassland and coastal heath with areas of bare rock.
- Rhostir Mynydd Celyn (B03) IACC Wildlife Site, approximately 1.95km to the west of the Logistics Centre at its closest point. This site consists of enclosed pastures with a number of bare rock outcrops. Grassland forms a mosaic with areas of dry and wet heath amongst the bare rock outcrops.
- There are 10 ancient woodland sites within 2km of the Logistics Centre. The closest is approximately 1.1km east of the Logistics Centre.

9.3.4 In accordance with the receptor valuation criteria presented in table B9-12 (chapter B9, Application Reference Number: 6.2.9), the cSAC and SPA are of high value as they are internationally important European Designated Sites.

9.3.5 The SSSI is of high value as this site is a nationally important statutory designated site.

9.3.6 The IACC Wildlife Sites are considered to be of medium value as they are non-statutory designations, important in a county/regional context.

9.3.7 Ancient woodland sites in Anglesey are considered to be of high value due to their restricted range and highly limited potential for substitution.

Terrestrial and freshwater habitats and species

Habitats

9.3.8 The habitats within and around the boundary of the Logistics Centre site are shown in appendix H9-1 (Application Reference Number: 6.8.17), as recorded during a Phase 1 habitat survey in September 2015.

9.3.9 Within the boundary of the Logistics Centre site, the habitats predominantly consisted of poor semi-improved grassland with small areas of mixed plantation woodland dominated by sycamore (*Acer pseudoplatanus*); semi-improved neutral grassland; dense/continuous and scattered scrub; marshy grassland; species-poor defunct hedgerow; tall ruderal; bare ground/hardstanding; rock exposure; and spoil.

9.3.10 In the area immediately adjacent to the Logistics Centre, habitats comprised open water (attenuation pond) bordered by dense/continuous scrub and a wet ditch to the north; improved grassland to the east; and semi-improved grassland and marsh/marshy grassland to the west. A dry stone wall ran along both sides of the footpath along the south-western boundary of the Logistics Centre site.

9.3.11 A larger area of broad-leaved semi-natural and mixed plantation woodland was located approximately 120m to the south and east of the Logistics Centre site boundary at its nearest point.

9.3.12 The types of habitats recorded are considered to be of negligible value given their common nature across Anglesey, and are therefore not taken forward in this assessment. However, they do have the potential to support notable and protected species.

9.3.13 Due to the absence or limited extent of habitats necessary to support notable assemblages of fungi, lichens, bryophytes, terrestrial invertebrates or aquatic species, these groups are not considered further in this assessment. Similarly, due to the limited extent of suitable habitat that would be affected by the Logistics Centre, notable mammals (with the exception of badger (*Meles meles*); bats; otter (*Lutra lutra*); and water vole) have been excluded from this assessment.

Species

9.3.14 The results of the Phase 1 habitat surveys (appendix H9-1 (Application Reference Number: 6.8.17) and appendix H9-3 (Application Reference Number: 6.8.19)), indicate that the Logistics Centre site is considered to provide suitable habitat for amphibians; reptiles; breeding and over-wintering birds; badger; foraging and commuting bats; otter and water vole. No invasive non-native species were recorded.

Amphibians

9.3.15 Cofnod provided no records of great crested newt (GCN) within the 2km study area of the Logistics Centre for the period 2007 to 2017.

9.3.16 The wet ditch and attenuation pond to the north-east of the Logistics Centre site were considered to provide potential breeding habitat for amphibians. The surrounding scrub, grassland and tall ruderal vegetation were considered to provide suitable foraging and sheltering habitat, although the majority of the Logistics Centre site was not considered suitable.

9.3.17 Environmental DNA (eDNA) testing of the attenuation pond for GCN in 2016 returned negative results (appendix H9-3, Application Reference Number: 6.8.19). GCN is therefore presumed to be absent from the Logistics Centre site and this receptor is not taken forward in this assessment.

Reptiles

9.3.18 Cofnod records included two reptile species within the study area in the last 10 years: the closest records were two slow worm (*Anguis fragilis*) approximately 600m to the north-west from 2011, and four records of common lizard (*Zootoca vivipara*) approximately 1.5km to the south from 2014.

9.3.19 Within the Logistics Centre site there is habitat with the potential to support reptiles; such habitat consists of small areas of plantation woodland, semi-improved neutral grassland, scrub, rock exposure and spoil. A single slow worm was recorded within the Logistics Centre site during surveys undertaken in 2017 (appendix H9-4, Logistics Centre Reptile Survey, Application Reference Number: 6.8.20).

9.3.20 Slow worm and common lizard are legally protected species. They have been assigned a low value based on the likelihood of there being low numbers present in the areas of suitable habitat throughout the Logistics Centre site.

Breeding and over-wintering birds

9.3.21 The data search returned records of approximately 150 bird species within 2km of the Logistics Centre, several of which are listed as Species of Principal Importance in accordance with the requirements of Section 7 of the Environment (Wales) Act 2016 and Schedule 1 of the Wildlife and Countryside Act 1981 (as amended).

9.3.22 The following bird species were recorded during the Phase 1 habitat survey: lapwing (*Vanellus vanellus*), kestrel (*Falco tinnunculus*) and curlew (*Numenius arquata*), the latter observed loafing in fields within the vicinity of the Logistics Centre site, although not within the site boundary.

9.3.23 Habitats with the potential to support breeding birds in the Logistics Centre site comprised scrub, defunct hedgerow and plantation woodland. There is no evidence to suggest that these features support species listed in Schedule 1 of the Wildlife and Countryside Act 1981 (as amended), although there is the potential for species listed in accordance with the requirements of Section 7 of the Environment (Wales) Act 2016 to be present, e.g. linnet (*Carduelis cannabina*), dunnock (*Prunella modularis*) and song thrush (*Turdus philomelos*).

9.3.24 Breeding birds as a receptor have therefore been assigned a value of low.

9.3.25 The semi-improved neutral grassland, plantation woodland and scrub provide limited foraging and roosting resources for over-wintering birds. Taking into account the abundance of alternative similar habitat in the surrounding landscape, it is considered that the assemblage of over-wintering bird species with the potential to be affected is of negligible value.

Badger

9.3.26 The Cofnod data search returned 14 records of badger within 2km of the Logistics Centre site taken from 2007 to 2017. A subsidiary sett record was found approximately 500m south-west of the Logistics Centre site, and field signs of badger and various badger corpses were recorded along the A55 road within approximately 500m of the site.

9.3.27 No signs of badger activity were found during the Phase 1 habitat surveys (appendix H9-1, Application Reference Number: 6.8.17; and appendix H9-3, Application Reference Number: 6.8.19). The species is therefore considered to be absent and is not considered any further in this assessment.

Bats

9.3.28 The Cofnod data search returned records of four species of bat including Whiskered/Brandt's bat (*Myotis mystacinus/brandtii*), approximately 1.4km to the east of the Logistics Centre site within Parc Glannau Penrhos, and three records of common pipistrelle (*Pipistrellus pipistrellus*), approximately 1.2km to the south-west, 1.6km west and 1.6km east of the site.

9.3.29 The woodland, scrub, hedgerow and grassland were considered to be suitable foraging habitats for bats but no trees within the study area had potential to support roosting bats.

9.3.30 There is substantial habitat surrounding the site which is potentially suitable for use by foraging and commuting bats, such as semi-natural broadleaved woodland to the south-east, and marshy grassland to the west, east and south. Due to this and the lack of roost evidence within the Logistics Centre site boundary, the site is considered to be of limited value to bats. Bats as a receptor have therefore been assigned a low value.

Otter and water vole

9.3.31 The Cofnod data search returned four records of otter between 2007 and 2017, the nearest being approximately 300m north-west of the Logistics

Centre site, and a single water vole record from 2008 located at the attenuation pond to the north-east of the site.

9.3.32 No signs of otter were recorded within the study area. The ditch running along the northern boundary provided limited foraging opportunities and would allow movements through the catchment, although it would not offer sites for holt construction or sufficient cover to lie up. The lack of evidence of otter using the site and the habitat present indicates the species is likely to be absent, and it has therefore not been taken further in this assessment.

9.3.33 Field signs of water vole were recorded within the marshy grassland habitat to the north-west of the site in 2015 (appendix H9-1, Application Reference Number: 6.8.17). The steep-sided ditches to the north of the Logistics Centre site and availability of grass and other vegetation for food and nesting was considered to provide suitable habitat for this species, although no evidence of its presence was recorded.

9.3.34 Water vole is listed in accordance with the requirements of Section 7 of the Environment (Wales) Act 2016 and in the Local Biodiversity Action Plan [RD1]. It is in major decline at the national scale but appears to be fairly stable, if at low numbers, on Anglesey, possibly due to the efforts to prevent American mink (*Neovison vison*) colonisation. Given historic records of water vole in habitat adjacent to the Logistics Centre site, but an absence of records from within the site itself, water vole has been assigned a low value.

Summary of receptors

9.3.35 In accordance with chapter B9 (Application Reference Number: 6.2.9), only those receptors considered to be present and of low, medium and high value and have potential to be affected by the proposed development are taken forward to assessment. These are listed in table H9-1.

Table H9-1 Value of receptors taken forward to assessment

Receptor	Value of receptor
North Anglesey Marine/Gogledd Môn Forol cSAC	High
Anglesey Terns SPA	High
Beddmanarch-Cymyran SSSI	High
Ancient woodland sites	High
Arfordir Bwth Corwgl – Bae Trearddur IACC Wildlife Site	Medium
Rhostir Mynydd Celyn IACC Wildlife Site	Medium
Reptiles	Low
Breeding birds	Low
Bats	Low
Water vole	Low

Evolution of baseline

9.3.36 The dominant land use in the study area was low-quality agricultural habitat, i.e. poor semi-improved grassland. The Parc Cybi site as a whole (approximately 56.5ha) has outline planning permission for employment purposes, obtained in 2010. As such, in the absence of the proposed Logistics Centre, the site would likely be developed as distribution and warehousing space.

9.4 Design basis and activities

9.4.1 This section sets out the design basis for this assessment of effects. It sets out where any assumptions have been made to enable the assessment to be carried out at this stage in the evolution of the design. This section also identifies the embedded and good practice mitigation that will be adopted to reduce adverse effects as inherent design features or by implementation of standard industry good working practice.

9.4.2 As described in chapter H1 (proposed development) (Application Reference Number: 6.8.1), the application for development consent is based on a parameter approach. The assessment described within this chapter has taken into consideration the flexibility afforded by the parameters. A worst case scenario has therefore been assessed from a terrestrial and freshwater ecology perspective within the parameters described in chapter H1 (Application Reference Number: 6.8.1).

Construction

9.4.3 The design and construction of the Logistics Centre will follow that described in chapter H1 (Application Reference Number: 6.8.1).

Basis of assessment and assumptions

9.4.4 There are a number of construction activities required for the Logistics Centre that could impact on terrestrial ecology. It is anticipated that the construction phase would last 15 months. The relevant activities include:

- site clearance, including vegetation clearance;
- construction and establishment of a site compound and welfare facilities, including drainage; and
- lighting of construction works.

Embedded mitigation

9.4.5 Mitigation embedded in the designs presented in chapter H1 (Application Reference Number: 6.8.1), the overarching Wylfa Newydd Code of Construction Practice (CoCP) (Application Reference Number: 8.6), volume 3 of the Design and Access Statement (Associated Developments and Off-Site Power Station Facilities) (Application Reference Number: 8.2.3), and the Logistics Centre sub-CoCP (Application Reference Number: 8.11) include the following measures relevant to ecological receptors.

- The design of the Logistics Centre would retain as many existing features as practicable e.g. hedgerows; boundary features; exposed rock; marshy grassland; and the waterbody to the north-east. Existing hedgerows and the stone wall to the south to be retained and enhanced where practicable.
- As far as practicable, the lighting design for the Logistics Centre mitigates the spill into adjacent habitats, and employs a control system which illuminates only those areas where activities are occurring.
- Drainage would be designed to mitigate any significant effect on the attenuation pond (see chapter H8, Application Reference Number: 6.8.8).

Good practice mitigation

9.4.6 Good practice mitigation during the construction phase includes the below measures which would be implemented via the overarching Wylfa Newydd CoCP (Application Reference Number: 8.6) and the Logistics Centre sub-CoCP (Application Reference Number: 8.11).

In order to avoid any breaches of legislation protecting habitats and species, the following measures will be implemented.

- Habitat manipulation will be used to encourage dispersal of reptiles from habitats that will be removed during construction of the Logistics Centre into areas of adjacent habitat that will not be affected.
- Supervision of destructive works by an Ecological Clerk of Works (ECoW) to capture and move any reptiles discovered, and release them into areas of adjacent habitat that will not be affected.
- A pre-construction survey will be completed before any works in close proximity to the attenuation pond will take place to search for evidence of water vole, including burrows, latrines and feeding remains. This will include areas up to 50m from the locations of the drainage infrastructure connection. This will be secured through a DCO requirement, Draft Development Consent Order (Application Reference Number: 3.1).
- In the event that water vole burrows are identified in areas that are planned to be directly affected, Natural Resources Wales will need to be consulted with regards to the need to obtain a Conservation Licence to allow works to continue.
- Should the pre-construction survey identify water vole burrows in the areas of the attenuation pond affected by works, then a Conservation Licence from Natural Resources Wales will need to be obtained.
- Avoidance of nesting habitat removal during the bird breeding season (March to August inclusive). If not possible, then works would be supervised by an ECoW with appropriate protection measures put in place should active nests be found. These would include exclusion zones around active nests until chicks had fledged or nests had become inactive, as determined through monitoring by the ECoW.

- Pre-construction surveys will be undertaken for invasive non-native species in order to inform construction decisions. Good practice biosecurity measures would provide the control and, if necessary, eradication of the invasive species, using guidance publications such as *Guidance: Prevent harmful weeds and invasive non-native plants spreading* [RD2].
- The Wylfa Newydd CoCP (Application Reference Number: 8.6) and the Logistics Centre sub-CoCP (Application Reference Number: 8.11) set out the overarching pollution management principles that would be applied across the Logistics Centre site through the construction period. This includes good working practices and measures to protect the water environment, including management of sediment and pollution response plans. The Wylfa Newydd CoCP (Application Reference Number: 8.6) and the Logistics Centre sub-CoCP (Application Reference Number: 8.11) also set out good working practices to control fugitive dust during the construction phase.

9.4.7 Those good practice mitigation measures relating to the avoidance of breaches of the legislation protecting species e.g. timing of works, are also described in appendix H9-2 (Application Reference Number: 6.8.18).

Operation

9.4.8 The activities involved in the operation of the Logistics Centre would be as described in chapter H1 (Application Reference Number: 6.8.1).

Basis of assessment and assumptions

9.4.9 It is anticipated that the Logistics Centre would be operational for almost five years, between Quarter 1 Year 1 and Quarter 4 Year 5, and during this time it would operate for 24 hours a day, seven days a week, with the site being lit during the hours of darkness.

Embedded mitigation

9.4.10 No specific embedded mitigation has been identified for terrestrial and freshwater ecology for the operation of the Logistics Centre.

9.4.11 Details on non-topic specific embedded mitigation for the Logistics Centre are provided in chapter H1 (Application Reference Number: 6.8.1).

Good practice mitigation

9.4.12 No specific good practice mitigation has been identified for terrestrial and freshwater ecology for the operation of the Logistics Centre. However, of relevance during operation are those measures designed to further reduce hydrological effects that are set out in chapter H8 (Application Reference Number: 6.8.8), such as procedures to follow in the event of a fuel leak or spillage, and the maintenance schedule for the oil separator and checking the outfall structure.

Decommissioning

Basis of assessment and assumptions

9.4.13 It is assumed that, after the operational lifetime of the Logistics Centre, the site would not be returned to its previous state and would remain available for another employment use. The decommissioning phase would entail the removal of the welfare/security building, the inspection bay covering, the security scanner and the security kiosks.

Embedded mitigation

9.4.14 Embedded mitigation for the decommissioning of the Logistics Centre would be likely to be similar to those measures employed during the construction phase. However, the level of significance of the effects would be dependent on the baseline conditions of ecological receptors within and outwith the boundary of the Logistics Centre at the time.

Good practice mitigation

9.4.15 Good practice mitigation for the decommissioning of the Logistics Centre would be likely to be similar to those measures employed during the construction phase. However, the level of significance of effects would be dependent on the baseline conditions of ecological receptors within and outwith the boundary of the Logistics Centre site at the time.

9.5 Assessment of effects

9.5.1 This section presents the findings of the assessment of potential impact pathways associated with the construction, operation and decommissioning of the Logistics Centre. Table H9-2 provides a summary of the potential impact pathways.

Table H9-2 Summary of potential impact pathways for ecological receptors

Potential effect	Area in which the effect may influence ecological receptors	Receptors that could be affected
Mortality and injury during construction	Mortality and/or injury of species during the vegetation clearance of the land within the Logistics Centre site boundary.	Reptiles. Breeding birds.
Changes in air quality during construction.	Releases in fugitive dust could affect receptors within 50m of the boundary of the Logistics Centre site. Emissions from plant and machinery could occur up to 500m from the entrance of the Logistics Centre site.	Statutory and non-statutory designated sites for nature conservation. Ancient woodland.
Changes in air quality during operation	Emissions may affect ecological receptors up to 200m from roads affected by increased traffic using the Logistics Centre across the whole of Anglesey. This is addressed in chapter C4 (Application Reference Number: 6.3.4).	Statutory and non-statutory designated sites for nature conservation. Ancient woodland.
Habitat loss during construction.	Habitat loss would be restricted to areas cleared to make way for the construction of the Logistics Centre. There would be no additional habitat loss during its operation.	Reptiles. Breeding birds. Bats. Water vole.
Disturbance via increases in noise and light pollution during construction and operation.	Disturbance via increases in lighting and noise during all stages could affect species within the Logistics Centre site and its immediate boundary.	Bats.

Potential effect	Area in which the effect may influence ecological receptors	Receptors that could be affected
Hydrological changes during construction and operation.	Hydrological changes could affect freshwater habitats adjacent to the Logistics Centre site.	Water vole.

Construction

Mortality and injury

9.5.2 The Logistics Centre design would result in the clearance of terrestrial habitat which has the potential to result in the mortality and/or injury of reptiles and bird eggs/chicks within active nests.

9.5.3 Good practice mitigation measures would manipulate habitats during clearance to encourage reptiles into the abundant adjacent suitable habitat. The timing of clearance works would avoid the bird nesting period. It is therefore considered that the risk of mortality and/or injury on reptiles and birds would be negligible, resulting in a negligible effect.

Air quality changes

9.5.4 Changes in air quality have the potential to affect statutory designated sites and ancient woodland via nitrogen and acid deposition, or from releases of fugitive dust.

9.5.5 Air quality modelling (see chapter H5, Application Reference Number: 6.8.5) shows that there is no potential for air quality changes to affect statutory designated sites or ancient woodland during construction. This conclusion with respect to European Designated Sites is supported by the shadow Habitat Regulations Assessment Report (Application Reference Number: 5.2), undertaken in support of the application for development consent. With the application of good practice mitigation, the release of fugitive dust is also not predicted to have any adverse effects as it would mitigate the risk of deposition on sensitive receptors.

9.5.6 On this basis, the magnitude of change of air quality on statutory designated sites or ancient woodland is predicted to be negligible. Effects would therefore be negligible.

Habitat loss

9.5.7 The Logistics Centre design would result in the loss of terrestrial habitat which has the potential to support reptiles, breeding birds and bats. The key areas of habitat for bats and birds are the boundary linear features (hedgerows and dry stone walls). The scrub, rock outcrops and grassland habitats support a low population of slow worm.

9.5.8 The embedded mitigation in the form of retention of areas of rock outcrop and hedgerow, and the planting of species-rich grassland and new hedgerow

would increase the amount of habitat of value to breeding birds, bats and reptiles compared to the current baseline. This is considered to be a small magnitude change and would result in a minor positive effect for bats, reptiles and breeding birds.

9.5.9 Connection of the surface water drainage outfall to the local Parc Cybi attenuation pond i.e. the area of marshy grassland shown in appendix H9-1 (Application Reference Number: 6.8.17) in the north-west of the site, could affect water vole through the loss of places of shelter and refuge. Good practice mitigation to undertake pre-construction surveys of any areas affected by drainage installation for the presence of water vole burrow would allow such features to be avoided, leading to a negligible magnitude of change. Effects would therefore be negligible.

Disturbance

9.5.10 Disturbance from lighting could affect bats, but with embedded mitigation in the form of the retention of boundary features and the avoidance of light spill onto them, the magnitude of change is predicted to be negligible; a very minor detrimental alteration to the bats' use of these features might occur, and the effect is considered to be negligible.

Hydrological change

9.5.11 Changes in water quality (increased sediment loading; increased pollutant levels) could occur and affect the adjacent areas where water vole were present. Good practice mitigation, such as the management of surface water discharge and suspended solids runoff, detailed within the overarching Wylfa Newydd CoCP (Application Reference Number: 8.6) and the Logistics Centre sub-CoCP (Application Reference Number: 8.11), and as described in chapter H8 (Application Reference Number: 6.8.8), would mitigate this to a negligible magnitude of change with a negligible effect.

Operation

Air quality changes

9.5.12 The changes in air quality during operation are limited to those associated with vehicle emissions, and the potential effects on terrestrial and freshwater receptors from vehicle emissions are considered as part of the project-wide effects within chapter C4 (Application Reference Number: 6.3.4).

Disturbance

9.5.13 Embedded mitigation in the form of the lighting design for the Logistics Centre during operation would avoid sensitive boundary features potentially used by bats for commuting and foraging. As in construction, the magnitude of change is predicted to be negligible due to the very minor detrimental alteration to the receptor's use of these habitats, with the resulting effect considered to be negligible.

9.5.14 The predicted changes in noise during operation are set out in chapter H6 (noise and vibration) (Application Reference Number: 6.8.6). The assessment

concluded that, for the areas of hedgerow planting adjacent to the site, the level of noise would be less than 65dB $L_{Aeq\ T}$. The new hedgerows would have the potential to be used by bats for commuting and foraging during the operation of the Logistics Centre. The magnitude of change is considered to be negligible given the good practice mitigation set out in chapter H6 (Application Reference Number: 6.8.6), such as the requirement for vehicles to turn off engines whilst queuing for entry to the Logistics Centre or scanning facility, and the banning of horn use whilst within the Logistics Centre. The species present are considered unlikely to change foraging or commuting habitats given they are already habituated to general traffic noise within the locality (A55 and other main roads within the area); therefore, the effect is considered to be negligible.

Hydrological change

9.5.15 Embedded and good practice mitigation would manage surface water runoff, alleviating the flood risk to areas off-site and allow the attenuation of surface water pollutants; details are provided in chapter H8 (Application Reference Number: 6.8.8). These measures would lead to a negligible magnitude of change on water vole given the limited opportunity for alteration to this species' habitat. Hydrological changes would therefore lead to a negligible effect.

Decommissioning

9.5.16 Given the nature of the decommissioning works covering the removal of buildings and the retention of hard standing, it is considered unlikely that they would have any effects on the ecological receptors which would have been established on habitats surrounding the Logistics Centre. The buildings which would be demolished are predicted to offer no nesting, roosting or foraging potential for receptors including breeding birds and bats, and therefore their demolition is assessed as a negligible effect.

9.6 Additional mitigation

9.6.1 There are no minor, moderate or major adverse effects predicted due to construction, operation or decommissioning of the Logistics Centre. There is therefore no additional mitigation proposed.

9.7 Residual effects

9.7.1 No adverse effects of minor significance or greater were identified for terrestrial and freshwater ecology.

9.8 References

Table H9-3 Schedule of references

ID	Reference
RD1	Isle of Anglesey County Council. 2003. Working for the wealth of wildlife: Anglesey's local biodiversity action plan (LBAP) – B2 Habitat Action Plans (HAPs) and Species Action Plans (SAPs).
RD2	Natural England, Department for Environment, Food & Rural Affairs, and Environment Agency. 2016. *Guidance: Prevent harmful weeds and invasive non-native plants spreading*. [Online]. [Accessed: June 2017]. Available from: https://www.gov.uk/guidance/prevent-the-spread-of-harmful-invasive-and-non-native-plants.

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