

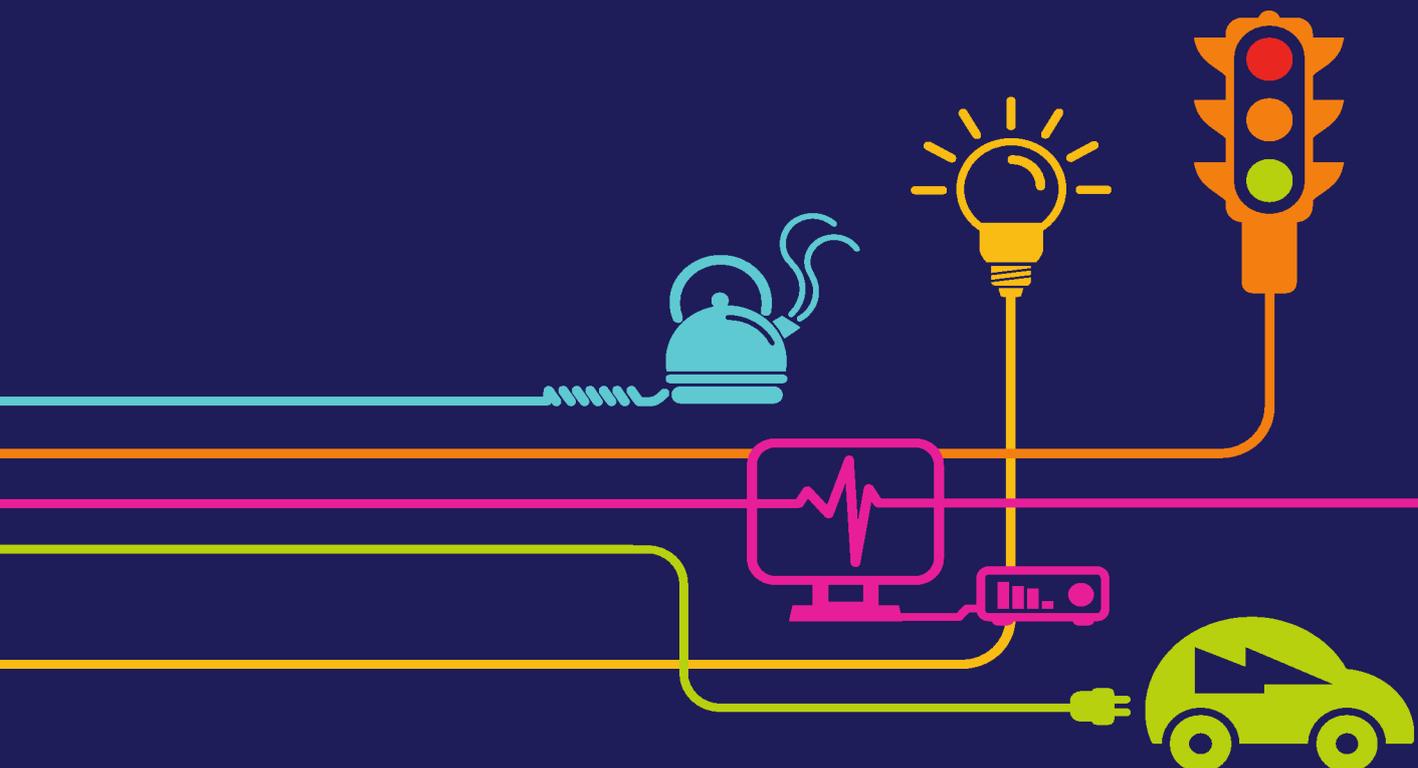
## DOCUMENT 5.9.2.2

# Designated Sites Information

## Chapter 9 – Appendix 2

National Grid (North Wales Connection Project)

*Regulation 5(2)(a) including (l) and (m) of the Infrastructure Planning (Applications: Prescribed Forms and Procedure) Regulations 2009*





**nationalgrid**

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# **North Wales Connection Project**

## **Volume 5**

### **Document 5.9.2.2 Appendix 9.2 Designated Sites Information**

National Grid  
National Grid House  
Warwick Technology Park  
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Warwick  
CV34 6DA

Final September 2018

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# 1 Designated Sites Information

- 1.1.1 This document details all ecology related statutory and non-statutory designated sites within, and within 2 km of, the Order Limits of the Proposed Development; this is referred to as the study area.
- 1.1.2 Sites designated for purposes other than ecology, such as geological Sites of Special Scientific Interest have not been included as these are not relevant to ecology; these are discussed in Chapter 11, Geology, Hydrogeology and Ground Conditions (**Document 5.11**) of the Environmental Statement (ES).
- 1.1.3 The designated sites are detailed in Table 9.2 below and a summary of the qualifying/interest features or reason for designation is provided where this information is available.
- 1.1.4 The approximate distance and direction of each designated site at its nearest point to the Order Limits is included.
- 1.1.5 The final column of the table states whether the designated site has been considered further in the Ecological Impact Assessment (EclA) provided in Chapter 9, Ecology and Nature Conservation (**Document 5.9**) of the ES. Some of the sites listed in Table 9.2 have been excluded from assessment in the EclA due their distance from the Proposed Development and the resulting absence of ecological pathways for effects.
- 1.1.6 In some instances, a study area larger than 2 km from the Order Limits has been considered, for example to account for certain highly mobile ornithological and marine receptors and for those designated sites that have potential effects because of increased emissions. These sites are included in the 'Wider Area' section of the table. Sites that lie within 200 m of the Construction Traffic Routes have been screened in for potential effects through emissions where these road links exceed the criteria outlined in Chapter 14, Air Quality (**Document 5.14**).
- 1.1.7 The locations of the statutory and non-statutory sites included in Table 9.2 below are shown on the ES Chapter 9, Ecology and Nature Conservation (**Document 5.9**) Figures 9.1 to 9.5 (**Documents 5.9.1.1 to 5.9.1.5**).

1.1.8 The following documents should be consulted for further information on the assessment of designated sites:

- Chapter 9, Ecology and Nature Conservation (**Document 5.9**);
- Chapter 11, Geology, Hydrogeology and Ground Conditions (**Document 5.11**);
- Chapter 12, Water Quality, Resources and Flood Risk (**Document 5.12**);
- Chapter 13, Traffic and Transport (**Document 5.13**);
- Chapter 14, Air Quality (**Document 5.14**); and
- North Wales Connection Applicants Report to Support the Habitats Regulations Assessment (HRA) (**Document 5.23**).

*Abbreviations for Designated Sites*

cSAC	Candidate Special Area of Conservation	Statutory
SAC	Special Area of Conservation	Statutory
SPA	Special Protection Area	Statutory
SSSI	Site of Special Scientific Interest	Statutory
NNR	National Nature Reserve	Statutory
LNR	Local Nature Reserve	Statutory
cCWS	Candidate County Wildlife Site	Non-Statutory
CWS	County Wildlife Site	Non-Statutory
NWWT	North Wales Wildlife Trust	Non-Statutory

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
<b>Section A</b>			
North Anglesey Marine/Gogledd Mon Forol cSAC	Annex II species - Primary reason for SAC selection: Harbour porpoise ( <i>Phocoena phocoena</i> ) Extends north and west from the coast of Anglesey; the site is designated solely for the purpose of aiding management of harbour porpoise populations throughout UK waters, in accordance with EU legislation.	224 m north Section A but Section F (approximately 32 km) only considered for Tunnel Crossing Zone due to mobile species	Included - There is a pathway through potential effects of EMF during operation and noise and vibration from sub-seabed tunnel construction on species. Mammals associated with this designated site have not been identified as being sensitive to contamination from blowout of drilling slurry and therefore this effect is not considered further in the context of this receptor.
Bae Cemlyn /Cemlyn Bay SAC	Annex I habitats - Primary reason for SAC selection: Coastal Lagoons Annex I habitats - Qualifying feature for SAC selection: Perennial vegetation of stony banks.	1.42 km west	Excluded from the ES and HRA as no pathways for effects have been identified.
Anglesey Terns/Morwenoliaid Ynys Mon SPA	Qualifying species of the SPA: During the breeding season the area regularly supports: <ul style="list-style-type: none"> <li>Roseate tern (<i>Sterna dougallii</i>) 3 pairs (5% of the GB breeding population)</li> <li>Common tern (<i>Sterna hirundo</i>) 189 pairs (1.5% of the GB breeding population)</li> <li>Arctic tern (<i>Sterna paradisaea</i>) 1,290 pairs (2.9% of the GB breeding population)</li> <li>Sandwich tern (<i>Sterna sandvicensis</i>) 460 pairs (3.3% of the GB breeding population).</li> </ul>	224 m north	Excluded from the ES and HRA as no pathways for effects have been identified. The interest features are strictly coastal/pelagic within the study area and closest breeding site at Cemlyn Bay (1.4 km west) is too distant for disturbance to occur.
Tre'r Gof SSSI	This site has been selected for its biological interest, in particular as a representative example of rich-fen habitat in north-west Wales, and includes the Annex 1 habitat Calcareous fens with <i>Cladium mariscus</i> . The fen has developed in a basin above Cemaes Bay on the north Anglesey coast, and the vegetation present consists of a mosaic of rich-fen and associated communities. There are stands of fen meadows in which blunt-flowered rush ( <i>Juncus subnodulosus</i> ) and other jointed rushes are abundant; these grade into a variety of other communities in which fen species such as fen sedge ( <i>Cladium mariscus</i> ), black bog rush ( <i>Schoenus nigricans</i> ) and common reed ( <i>Phragmites communis</i> ) are locally dominant. Swamp vegetation with stands of greater reedmace ( <i>Typha latifolia</i> ), and fen scrub occur in places. The variable structure of the vegetation at this site probably reflects a chequered management history as well as other environmental gradients. A wide range of wetland plant species occur in the various communities and of particular interest is the presence of a population of the marsh fern ( <i>Thelypteris thelypteroides</i> ) which is a scarce	32 m north-east	Included – pathway for water quality effects and air quality through dust generation and deposition.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>fen plant in Britain where it appears to be declining over much of its range.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>lime-rich wetland with associated plant communities, characterised by blunt flowered rush, black bog rush and great fen sedge; and</li> <li>Nationally scarce marsh fern.</li> </ul> <p>In addition, herb-rich meadow, pools, scrub and hedge habitats contribute to the special interest.</p>		
Llyn Hafodol and Cors Clegyrog SSSI	<p>This site comprises two wetland basins situated very near to one another in north Anglesey; they are of biological interest, principally as examples of lowland mire habitat types.</p> <p>Cors Clegyrog is an acidic basin mire with a mosaic of different vegetation types. Over much of the peat-filled basin there are communities in which purple moor-grass (<i>Molinia caerulea</i>), cottongrass (<i>Eriophorum angustifolium</i>), heather (<i>Calluna vulgaris</i>) and bogmosses (<i>Sphagnum spp.</i>) are locally abundant; acidic fen vegetation with species such as bottle sedge (<i>Carex rostrata</i>) is also present and there are stands of damp grassland in peripheral areas.</p> <p>At Llyn Hafodol mesotrophic mire or poor fen vegetation is particularly well-represented and characterised by the presence of species such as water horsetail (<i>Equisetum fluviatile</i>), bog-bean (<i>Menyanthes trifoliata</i>), marsh cinquefoil (<i>Potentilla palustris</i>) and bottle sedge with a wide range of associated species including the uncommon greater spearwort (<i>Ranunculus lingua</i>). There is also a small area of open water where the nationally rare waterwort (<i>Elatine hydropiper</i>) grows in the muddy shallows.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>Cors Clegyrog - an acidic basin mire with a mosaic of different vegetation types, characterised by bog mosses, cotton grass, cross-leaved heath (<i>Erica tetralix</i>) and a fringing zone of acid fen characterised by bottle sedge.</li> <li>Llyn Hafodol - mesotrophic mire characterised by bogbean (<i>Menyanthes trifoliata</i>), marsh cinquefoil and bottle sedge.</li> </ul>	276 m south-west	Excluded - no pathways for effects have been identified.
Cae Gwyn SSSI	<p>The main features of interest at Cae Gwyn are two wetland areas, separated by an area of heathland with outcropping rock. The southern wetland is confined by a rock basin; it has a 'lawn' of bogmoss and a profusion of common wetland herbs such as bogbean and marsh cinquefoil. The flora is distinguished by an abundance of royal fern (<i>Osmunda regalis</i>) which varies from very large old plants to young plants; other notable species are bog sedge (<i>Carex limosa</i>) and cranberry (<i>Vaccinium oxycoccus</i>). The northern wetland differs in having denser areas of willow and common reed, but is similar in having numerous plants of <i>Osmunda</i>.</p> <p>The special feature of the SSSI is:</p> <ul style="list-style-type: none"> <li>area of acid wetland: Two wetland areas, separated by an area of heathland with outcropping rock.</li> </ul> <p>In addition, willow (<i>Salix sp.</i>) scrub, common reed (<i>Phragmites australis</i>) and grassy heathland with outcropping rock contribute to the special interest.</p>	1.09 km south-west	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	Notable species include royal fern, bog sedge and cranberry.		
Salbri SSSI	<p>Salbri has been notified for its biological interest, principally as an example of an acidic basin mire. The basin mire at Salbri is exceptionally intact and remains waterlogged throughout the year. Various species of bogmoss and other bryophytes form a more or less continuous cover over the mire surface: among the more abundant flowering plant are the ericaceous shrubs heather and cross-leaved heath, sedges, e.g. the cotton-grasses and <i>E. vaginatum</i> and the bottle sedge, and certain wetland herbs, e.g. marsh cinquefoil. Two nationally uncommon bryophytes, <i>Sphagnum platyphyllum</i> and <i>Cephalozia pleniceps</i>, have been recorded, and there are populations of locally uncommon flowering plants including the mud sedge.</p> <p>The special feature of the SSSI is:</p> <ul style="list-style-type: none"> <li>acidic bog with a floating mat of several species of bog moss (including <i>Sphagnum papillosum</i>) and two uncommon sedges, white sedge (<i>Carex curta</i>) and mud sedge.</li> </ul> <p>In addition, areas of scrub, wet grassland and mud contribute to the special interest.</p>	1.40 km south-west	Excluded - no pathways for effects have been identified.
Bae Cemlyn/Cemlyn Bay SSSI	<p>The inner part of the bay is a tidal lagoon enclosed by a shingle ridge forming a "bay head barrier" of storm beach shingle. Saltmarsh communities occur around the lagoon. The shingle ridge, lagoon and brackish pools further inland support a number of uncommon plant species including sea kale (<i>Crambe maritima</i>), sea radish (<i>Rapohanus maritimus</i>), brackish water-crowfoot (<i>Ranunculus baudotii</i>) and (<i>Ruppia maritima</i>).</p> <p>There are colonies of common, arctic and sandwich terns which breed on low islands in the main lagoon. The number of breeding pairs of each species fluctuates from year to year but the site is particularly important for sandwich tern and often holds over 1% of the British breeding population.</p> <p>The water level in the lagoon is maintained by a weir which is controlled to prevent the ternery from flooding at high spring tides. Wintering wildfowl, notably wigeon (<i>Anas penelope</i>), shoveler (<i>Anas clypeata</i>), goldeneye (<i>Bucephala clangula</i>), teal (<i>Anas crecca</i>), mallard (<i>Anas platyrhynchos</i>) and tufted duck (<i>Aythya fuligula</i>) use the area.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>coastal lagoon;</li> <li>vegetated shingle characterised by sea kale, yellow horned poppy (<i>Glucium flavun</i>) and sea radish; and</li> <li>breeding bird assemblage (sandwich tern, roseate tern, common tern and arctic tern). The number of breeding pairs of each species fluctuates from year to year but the site is particularly important for sandwich tern and often holds over 1% of the GB breeding population.</li> </ul> <p>In addition, shingle barrier, saltmarsh, coastal grassland, marshy grassland, scrub, freshwater pools, ditches, inter-tidal rocks and rock pool habitats contribute to the species interest. Wintering wildfowl, notably wigeon, shoveler, goldeneye, teal, mallard and tufted duck use the area.</p>	1.42 km west	<p>No pathways for effects have been identified other than mobile species due to ornithological interest.</p> <p>Included - the wintering wildfowl that use this site also occur at wetland sites in the interior of Anglesey, especially Llyn Alaw, therefore assessed in relation to the potential for collision risk.</p>
Trwyn yr Wylfa/Wylfa Head LNR	Mixture of coastal grassland and heath habitats. Although there are no specific ornithological interest features listed for the site itself, the following have been recorded passing offshore: gannets, shearwaters, terns and other seabirds.	266 m north	Excluded - no pathways for effects have been identified. All bird species listed are

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
			coastal/pelagic and would not be affected by the Proposed Development.
Arfordir Mynydd y Wylfa - Trwyn Penrhyn CWS	<p>North facing coastal cliff and cliff top with coastal grassland, semi-improved acid grassland and rocky outcrops.</p> <p>The coastal grassland has prominent sheep's fescue, red fescue, Yorkshire fog and couch grass with species such as sea plantain, buck's-horn plantain, thrift, wild thyme, ladies bed-straw, birdsfoot trefoil, sheep's bit scabious and common knapweed. The acid grassland has prominent birdsfoot trefoil and also some sign of modification in the presence of perennial rye-grass.</p> <p>Bracken and brambles dominate some stretches of the coastline and elsewhere there are small areas of rush dominated marshy grassland with meadowsweet, purple moor-grass, common knapweed and common fleabane. Stonechats are recorded breeding here. This site includes Trwyn Wylfa LNR to the west.</p>	266 m north	<p>Included – pathway for hydrological effects as possible link across Tre'r Gof SSSI.</p> <p>The habitat here would not be affected by the Proposed Development and there would be no disruption to breeding bird activities in this area.</p>
Cors Cromlech CWS	<p>A basic mire with fen and species-rich marshy grassland, with dense scrub at the northern edge of blackthorn and hawthorn and scrub along the eastern edge of dense common gorse.</p> <p>The mire is dominated by bog moss with bottle and common sedges, water and marsh horsetails and soft rush. Yellow flag and branched bur-reed are locally abundant as are bogbean, marsh cinquefoil, creeping willow and meadowsweet.</p> <p>Reed canary-grass dominates the centre of the site and to the north of this is the marshy grassland. This is species-rich and includes sneezewort, lesser pond, star and hairy sedges, marsh marigold, northern marsh orchid, saw-wort, common lousewort and nodding bur-marigold. The latter species has a very local distribution on Anglesey.</p> <p>The southern part of the site has been improved in part since 1983. The extreme northern tip has also suffered from disturbance and burning.</p>	449 m south-west	Excluded - no pathways for effects have been identified.
Afon Wygyr CWS	<p>A small river with species-rich bank-side vegetation, marshy grassland and small woodlands. The valley provides a varied and undisturbed habitat for birds and other wildlife. The river contains brown trout (<i>Salmo trutta</i>) and eels (<i>Anguilla anguilla</i>).</p> <p>The bank-side vegetation includes alders, abundant monkey flower, purple loosestrife, hemlock water-dropwort and grey club-rush. The marshy grassland areas are floristically rich with hairy sedge, greater tussock-sedge, water figwort, common comfrey and yellow flag. Elm (<i>Ulmus sp.</i>) and ash (<i>Fraxinus excelsior</i>) woodlands, and one sycamore wood, are found along the valley slopes with ground cover mostly dominated by false oat-grass.</p> <p>A disused water-works has deep concrete tanks containing lush growths of monkey flower, common water-plantain and common spike-rush. About half of the marshy grassland has been improved since 1983 and has been removed from the revised site.</p>	714 m north-east	Included – pathway for hydrological effects but does not lie within the study area for the air quality assessment for NWC.
Trwyn Pencarreg CWS	<p>A large area of coastal heath grading to inland heath with coastal grassland and some marshy grassland.</p> <p>The coastal heath has dominant heather and bell heather with red fescue, tormentil, sea plantain, sheepsbit scabious, heath bedstraw, goldenrod and mat-grass. This heath grades to inland heath with the increasing</p>	761 m south-west	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>frequency of western gorse and the decrease in maritime species.</p> <p>The coastal grassland occurs in small patches and as a strip running immediately along the coast. It contains red fescue, sheep's fescue, Yorkshire fog, tormentil, common cat's-ear, thrift, sea plantain, buck's-horn plantain, spring squill and eyebright.</p> <p>The areas of marshy grassland are small and are dominated by purple-moor grass and sharp-flowered rush. Also present are green-ribbed sedge, common sedge and creeping willow.</p>		
Rhostir Mynydd Mechell CWS	<p>This site consists of five separate blocks of heathland with an associated areas of marshy grassland which are included because of their size and also because they represent the most intact part of a once much larger area of acid dry heath now much fragmented. They all contain acid dry heath with frequent heather, bell heather or western gorse or a combination of all three. The heath is variable in quality often grading to acid grassland with sheeps fescue and bents abundant and sheeps sorrel and heath bedstraw are often also present. There are areas of scattered to dense common gorse present in the heathland.</p> <p>The easternmost block has wet heath in the lower middle part with heather, purple moor-grass, rushes and western gorse.</p>	940 m south-west	Excluded - no pathways for effects have been identified.
Arfordir Trwyn y Buarth - Porth Wen CWS	<p>A small bay with a rocky shoreline with rock-pools that are uncovered as the tide drops. Towards the western end of the beach is a large natural rock arch incorporated into the remains of an old harbour. This site borders in part the SSSI Llanbadrig Dinas Gynfor which is designated for its geological interest and therefore not included in the Ecology and Nature Conservation chapter.</p>	1.86 km north-east	Excluded - no pathways for effects have been identified.
Cemlyn NWWT	<p>Coastal habitat with a large lagoon, separated from the sea by a naturally created shingle ridge. The site hosts a large and internationally important seabird colony, including common terns and Arctic terns and one of the UK's largest nesting population of sandwich terns. Other birds present include black-headed gull, ringed plover, oystercatcher, golden plover, redshank, dunlin, red-breasted merganser, shelduck, teal and wigeon.</p>	1.65 km west	<p>No pathways for effects have been identified other than mobile species due to ornithological interest.</p> <p>Included - black-headed gull, golden plover, redshank, red-breasted merganser, shelduck, teal and wigeon may occur within the interior of Anglesey, therefore assessed in relation to the potential for collision risk.</p>
Ancient Woodland	<p>There are six sites of ancient semi natural woodland and five sites of restored ancient woodland within the study area of Section A.</p>	Between 5 m and 1.2 km	Included – pathway for indirect effects.
<b>Section B</b>			
Llyn Alaw SSSI	<p>Llyn Alaw is the largest mesotrophic open water in West Gwynedd (quoted from the citation which refers to West Gwynedd in relation to a wider boundary however Llyn Alaw is located on Anglesey). It has considerable ornithological interest especially for overwintering wildfowl and the number of teal, shoveler and whooper swans at</p>	470 m south	Included – pathway for hydrological effects as located down catchment from the

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>times are around 1% of the British population. Other wildfowl species which occur, include mallard, wigeon, goldeneye, pochard and tufted duck and more recently ruddy duck and sometimes pink-footed geese. Common terns and black-headed gulls nest on islands in the reservoir while tufted duck, great crested grebe and coot also nest. In autumn large flocks of waders, in particular curlew, lapwing and golden plover, visit the exposed mud areas.</p> <p>The uncommon slender spike-rush (<i>Eleocharis acicularis</i>) occurs in the reservoir margins.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• the largest moderately nutrient-rich lake in Anglesey;</li> <li>• several species of over-wintering wildfowl, notably whooper swans (<i>Cygnus Cygnus</i>), shoveler and teal, the population of each closely reaching 1% of the British population;</li> <li>• breeding tufted duck; and</li> <li>• uncommon slender spike-rush which occurs on the lake margins.</li> </ul> <p>In addition, small areas of woodland and scrub along the lake margins, marshy grassland, exposed mud and small islands in the lake contribute to the special interest. Other wildfowl species which occur include mallard, wigeon, goldeneye, pochard and more recently ruddy duck and sometimes pink-footed geese. Common terns and black-headed gulls nest on islands in the reservoir while tufted duck, great crested grebe and coot also nest. In autumn large flocks of waders, in particular curlew, lapwing and golden plover, visit the exposed mud areas.</p>		<p>Proposed Development, with a direct runoff pathway.</p> <p>Also Included for birds - proximity to the Proposed Development within the foraging range of interest species: whooper swan, mallard, wigeon, tufted duck, pink – footed goose, black - headed gull, lapwing and curlew. Potential for these species to interact with the Proposed Development.</p>
Coed Cae Mawr CWS	<p>Broadleaved woodland comprising mature ash, beech (<i>Fagus sylvatica</i>), wych elm (<i>Ulmus glabra</i>), sycamore (<i>Acer pseudoplatanus</i>) and horse chestnut (<i>Aesculus Hippocastanum</i>) with smaller areas of dry and species-rich marshy grassland. Bird cherry, a rarity on Anglesey, also occurs here.</p> <p>The dry grassland has locally abundant sneezewort, devil's bit scabious and yellow rattle. Rushes and Yorkshire fog dominate the species-rich marshy grassland, which has abundant water-pepper, water mint and meadow buttercup.</p> <p>This site is valuable for bird life as woodland is scarce in this part of Anglesey.</p>	355 m south	Excluded - no pathways for effects have been identified and does not lie within the study area for the air quality assessment. Excluded for birds – woodland birds at this location would not be affected by the Proposed Development.
Ancient Woodland	There are five sites of ancient semi natural woodland and one site of restored ancient woodland within the study area of Section B.	Between 380 m and 1.4 km	Included – pathway for indirect effects.
<b>Section C</b>			
Corsydd Môn/Anglesey Fens SAC	<p>Annex I habitats - Primary reason for SAC selection: Hard oligo-mesotrophic waters with benthic vegetation of <i>Chara spp.</i>; Calcareous fens with and species of the <i>Caricion davallianae</i>; and Alkaline fens.</p> <p>Annex I habitats - Qualifying feature for SAC selection: Northern Atlantic wet heaths with <i>Erica tetralix</i> and <i>Molinia</i> meadows on calcareous, peaty or clayey-silt-laden soils (<i>Molinion caeruleae</i>).</p> <p>Annex II species – Primary reason for SAC selection: Geyer`s whorl snail (<i>Vertigo geyeri</i>).</p> <p>Annex II species - Qualifying feature for SAC selection: southern damselfly (<i>Coenagrion mercurial</i>); and marsh</p>	Within the Order Limits	Included – direct effects could occur through loss of habitat, also a pathway exists for hydrological alteration, and temporary disturbance/displacement/degradation of habitats and species

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	fritillary butterfly ( <i>Euphydryas aurinia</i> ).		through hydrology, severance and fragmentation, and changes to air quality.
Corsydd Môn a Llyn/Anglesey and Llyn Fens RAMSAR	<p>Ramsar Criteria:</p> <p>Ramsar criterion 1: The site supports a suite of base-rich, calcareous fens which is a rare habitat type within the United Kingdom's biogeographical zone. Habitats Directive Annex I features present (see SAC above for details).</p> <p>Ramsar criterion 3: The site supports a diverse flora and fauna with associated rare species and is of special value for maintaining the genetic and ecological diversity of the region. This includes flora species that are nationally important (<i>Dactylorhiza traunsteineri</i>, <i>Eriophorum gracile</i> and <i>Nitella tenuissima</i>) and faunal species at levels that are of international importance (<i>Vertigo geyeri</i>, <i>Vertigo moulinsiana</i>, <i>Coenagrion mercurial</i> and <i>Euphydryas aurinia</i>) and levels of national importance (otter (<i>Lutra lutra</i>) and five invertebrate species).</p>	<p>Within the Order Limits</p> <p>Note: The area of the Ramsar site and associated Llyn Fens SAC located on the Llyn Peninsula (shown as SAC 9 on Figure 9.2 (Document 5.9.1.2)) are not considered in the assessment.</p>	Included – direct effects could occur through loss of habitat, also a pathway exists for hydrological alteration, and temporary disturbance/displacement/degradation of habitats and species through hydrology, severance and fragmentation, and changes to air quality.
Cors Erddreiniog SSSI	<p>Cors Erddreiniog is a large calcareous valley mire of national importance. There are three fen basins interconnected by the drainage system. A Carboniferous limestone escarpment, bearing limestone grassland and a hazel woodland, lies along the eastern side of the main basin. From its foot emerge base-rich springs, associated with which is a rich flora of black bog rush; narrow-leaved marsh orchid (<i>Dactylorhiza traunsteineri</i>), which has been the subject of taxonomic research; fly orchid (<i>Ophrys insectifera</i>) - here growing in a most unusual habitat; and columbine (<i>Aquilegia vulgaris</i>). This orchid-rich vegetation type, found at a few sites in Anglesey and Llyn, is not found elsewhere in Great Britain.</p> <p>Fen dominants include great fen-sedge and blunt-flowered rush; purple moor grass is spreading in response to aeration following drainage. Locally there are acidic nucleii with bogmoss and cross-leaved heath. On the ridge between the central and north-west fen basins is an acidic heathland with marsh gentian (<i>Gentiana pneumonanthe</i>) in abundance. The site also has a rich insect fauna, particularly of Lepidoptera and Odonata.</p> <p>The special features of the SSSI within the Management Statement include:</p> <ul style="list-style-type: none"> <li>• habitats including: lime-rich wetland; swamp; spring-water fed wetland; heathland; large lake (Llyn yr Wyth Eidion); grassland;</li> <li>• uncommon floral species including a number of orchid species;</li> <li>• stoneworts (large aquatic algae);</li> <li>• a wide variety of invertebrates such as dragonflies, damselflies, butterflies and Geyer's whorl snail; and</li> <li>• populations of reptiles and amphibians including great crested newts (<i>Triturus cristatus</i>).</li> </ul>	Within the Order Limits	Included – direct effects could occur through loss of habitat, also a pathway exists for hydrological alteration, and temporary disturbance/displacement/degradation of habitats and species through hydrology, severance and fragmentation, and changes to air quality.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	In addition, areas of woodland, hedgerows, streams, ponds and small rock outcrops contribute to the special interest.		
Tyddyn Y Waen SSSI	<p>This site is selected for its biological interest, in particular as an example of fen meadow habitat with associated soligenous mire.</p> <p>There is a range of different vegetation communities within a small area at Tyddyn y Waen SSSI reflecting ecological gradients and a variable management history. Where there has been regular livestock grazing fen meadow vegetation dominated by sharp-flowered rush (<i>Juncus acutiflorus</i>) and blunt-flowered rush with a variety of associated forbs, including the locally uncommon fen bedstraw (<i>Galium uliginosum</i>), are present. Elsewhere, there are both acidic and base-rich flushes; in the former species such as purple moor-grass and bog asphodel (<i>Narthecium ossifragum</i>) occur, while in the latter black bog-rush is locally abundant and the vegetation is more species-rich with a number of infrequent plants, e.g. broad-leaved cottongrass (<i>Eriophorum latifolium</i>) and the liverwort (<i>Leiocolea bantriensis</i>). There are also large stands of great horsetail (<i>Equisetum telmateia</i>) and lesser pond-sedge (<i>Carex acutiformis</i>). In an unmanaged area there is a willow thicket dominated by grey willow (<i>Salix cinerea</i>).</p> <p>The special feature of the SSSI is:</p> <ul style="list-style-type: none"> <li>an area of fen meadow characterised by sharp-flowered rush, blunt flowered rush and fen bedstraw. Includes small areas of alkaline fen dominated by rushes such as black bog rush.</li> </ul> <p>In addition, willow scrub and swamp habitats contribute to the special interest.</p>	914 m north-east	Excluded - no pathways for effects have been identified.
Craig Wen/Cors Castell SSSI	<p>This site is selected as an example of lowland acidic heathland habitat and base rich fen.</p> <p>In damp sections of the heathland, heather and cross-leaved heath are the dominant ericaceous shrubs with deer-grass (<i>Trichophorum cespitosum</i>), purple moor-grass, bog asphodel and creeping willow (<i>Salix repens</i>) as frequent associates; in drier areas both bell heather (<i>Erica cinerea</i>) and western gorse (<i>Ulex gallii</i>) are abundant. Two uncommon heathland plant species, marsh gentian (<i>Gentiana pneumonanthe</i>) and pale heath violet (<i>Viola lactea</i>), both of which have declined over recent years in Britain, are present.</p> <p>The heathland grades into wetland associated with springlines, streams and basin mire. Extensive areas of fen are covered by black bog rush, and blunt flowered rush. This species rich plant community includes grass of Parnassus (<i>Parnassia palustris</i>), early marsh orchid (<i>Dactylorhiza incarnata</i>) and lesser clubmoss (<i>Selaginella selaginoides</i>). Slender sedge (<i>Carex lasiocarpa</i>), bottle sedge and great fen-sedge (<i>Cladium mariscus</i>) are locally dominant in the wetter parts of the mire. Small areas of limestone grassland are also present.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>wet heathland, characterised by common heather and cross-leaved heath;</li> <li>dry heathland characterised by bell heather and western gorse;</li> <li>lime-rich fen;</li> <li>lime-rich grassland; and</li> </ul>	1.74 km north-east	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<ul style="list-style-type: none"> <li>presence of marsh gentian and pale dog violet.</li> </ul> <p>In addition, areas of wet flushes, scrub, hedgerows, streams, ponds and small rock outcrops contribute to the special interest.</p>		
Cors Goch SSSI	<p>Cors Goch is a nationally important valley mire developed in a hollow in Carboniferous Limestone. The geology is complex and interstratified with the limestone are beds of a coarse pebbly sandstone. In close proximity are found acidic heaths with heather and pale dog-violet, limestone grassland with green-winged orchid (<i>Orchis morio</i>) and base rich fen. The fen is almost divided by a rock promontory into an east and a west basin. The east basin is very wet with an excellent association of 'brown mosses', black bog-rush with sedges (<i>Carex spp.</i>) and with communities dominated by great fen-sedge, common reed and blunt-flowered rush. Higher areas in the fen have acidic vegetation with bog mosses <i>Sphagnum papillosum</i> and <i>S. plumulosum</i>. Around the margin bog-myrtle (<i>Myrica gale</i>) forms a zone with black bog-rush. The western basin is somewhat drier, but contains similar fen communities, and a lake (Llyn Cadarn), which has an interesting hydrosere with bulrush, common club-rush (<i>Schoenoplectus lacustris</i>) and water-lilies (<i>Nymphaea alba</i>) and (<i>Nuphar lutea</i>). The fen has a rich insect fauna, the Lepidoptera and Odonata being well represented.</p> <p>The special features of the SSSI include:</p> <ul style="list-style-type: none"> <li>habitats including: lime-rich swamp, lime-rich fen, limestone grassland, dry heath;</li> <li>vascular plants including nationally scarce species such as pale dog-violet;</li> <li>stoneworts (large aquatic algae);</li> <li>medicinal leech (<i>Hirudo medicinalis</i>);</li> <li>a wide variety of invertebrates including many dragonfly species; and</li> <li>aquatic/open water community.</li> </ul> <p>In addition, areas of wet heath, scrub, bracken, stream and small rock outcrops contribute to the special interest. This designated site forms part of the Corsydd Mon/Anglesey Fens SAC and Corsydd Mon A Llyn/Anglesey and Llyn Fens Ramsar but is further away than the Cors Erddreiniog SSSI/NNR Section.</p>	1.86 km north-east	Excluded, no pathways for effects have been identified.
Cors Erddreiniog NNR	<p>Large, rich fen system which is the largest of the Anglesey fens renowned for its unusual and diverse vegetation, including stands of common reed, great fen sedge, blunt flowered rush and black bog rush. It supports a variety of rare plants including orchids. Habitats present include small lakes, heathland, woodland and acid wet heath.</p> <p>Cors Erddreiniog is one of the last sites for the marsh fritillary in Anglesey and holds an isolated population of the southern damselfly.</p>	Within the Order Limits	Included – direct effects could occur through loss of habitat, also a pathway exists for hydrological alteration, and temporary disturbance/displacement/degradation of habitats and species through hydrology, severance and fragmentation, and changes to air quality.
Cors Goch NNR	Anglesey's most complete fen basin and is primarily base rich fen sitting within a shallow valley fed with lime rich	1.86 km north-east	Excluded, no pathways for

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	water from the surrounding land via several springs and upwellings.		effects have been identified.
Maen Eryr CWS	<p>A floristically rich wet meadow adjacent to an area of species-rich woodland. The wetter parts of the meadow are dominated by rushes with herb species such as common spotted orchid, yellow rattle, marsh arrowgrass, bog asphodel and water mint. Drier areas have red bartsia, sneezewort and wild carrot.</p> <p>The woodland is dominated by ash and sycamore, with some birch and planted conifers. The understorey is of holly, elder, hawthorn and young trees. The ground flora is particularly rich in fern species, including lady fern, male fern, scaly male fern, broad-buckler fern, soft-shield fern, black spleenwort and common polypody.</p>	Adjacent to the Order Limits	Included – pathway for hydrological effects and air quality through and dust generation and deposition.
Prysan/Galchfaen/Fa gwyr Fawr CWS	<p>An extensive site on and below a limestone escarpment with a mosaic of vegetation types including species-rich calcareous grassland, marshy grassland, heath, basic flush and valley mire.</p> <p>The calcareous grassland includes common rockrose, salad burnet, purging flax, carline thistle, autumn gentian, ladies bedstraw and wild thyme. There is some scrub invasion here. Notable species include adders-tongue.</p> <p>The marshy grassland contains abundant rushes and sedges with butterwort, knotted pearlwort, bogbean, brookweed and grass of parnassus - a rare species on Anglesey.</p> <p>The wet heath has abundant purple moor-grass and cross-leaved heath with frequent heather and western gorse. The acid dry heath has abundant bell heather and western gorse and also the nationally scarce marsh gentian. The occurrence of black bog-rush here shows a basic influence. A basic flush occurs at the southern end of this site has grass of parnassus.</p> <p>The valley mire is separated from the main part of the site at the southern end. It has dominant purple moor-grass and rushes including hard rush. A basic influence is strongly present with black bog-rush occurring throughout. Small sedge species, butterwort, marsh pennywort, hemp agrimony, water mint occur throughout with flush vegetation including bogbean in the central part.</p>	583 m north- east	Excluded, no pathways for effects have been identified.
Coed Cefn-Du CWS	<p>Damp birch woodland with abundant alder (<i>Alnus glutinosa</i>). The ground is rich in mosses and the marshy areas within the wood contain species such as marsh marigold (<i>Caltha palustris</i>), wild angelica (<i>Angelica sylvestris</i>) and lesser skullcap (<i>Scutellaria minor</i>). There is a small area of standing water, containing bogbean and autumnal water-starwort (<i>Callitriche hermaphroditica</i>).</p> <p>The southeast corner consists of marshy grassland and is immediately adjacent to Cors Erddreiniog SSSI.</p>	825 m north-east	Included – pathway for hydrological effects.
Mynydd Bodafon CWS	<p>An extensive area of dry heath/grassland mosaic amongst numerous rock outcrops with some smaller areas of wet heath, basin mire, flushes, and wet birch and willow woodland. There is also a small lake present called Gors Fawr which is rich in invertebrate life, especially Odonata, and is also notable for the presence of the very rare pillwort in one of only three sites on Anglesey. The dry heath/grassland mosaic has dominant heather, bell heather, western gorse, bilberry and hair-grass. The wetter parts are more floristically rich and have abundant cross-leaved heath, creeping willow, round-leaved sundew, bog asphodel, bog moss and many-stalked spike-rush. The latter is a local rarity. Orchids are abundant in the flushes.</p> <p>Tyddyn y Waen SSSI abuts the south-east corner of the site.</p>	846 m east	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Graigfryn CWS	<p>A large area of basic flush and a range of types of marshy grassland with smaller additional patches of dry heath, acid flush and semi-improved neutral grassland. The site borders the Afon Lligwy along the valley bottom.</p> <p>The basic flush which mainly occurs at the southern end of the site has prominent black bog-rush, purple moor-grass and blunt-flowered rush together with angelica, bog-myrtle, saw-wort, devil's-bit scabious, parsley water-dropwort, small sedges and brown mosses. This vegetation is intimately associated the marshy grassland which has dominant blunt-flowered rush but little or no black bog-rush. Other species include water mint, marsh thistle and common knapweed. Where the drainage is freer this grades into semi-improved neutral grassland.</p> <p>Other areas of marshy grassland have dominant purple moor-grass with small sedges, saw-wort, quaking grass, common knapweed and tormentil. Further areas again are species-poor. The small acid flushes are associated with some of these in the northern part of the site below the area of dry heath. They have a continuous carpet of bog-moss and a high frequency of sharp-flowered rush. There are also species such as star sedge, round-leaved sundew, bog pimpernel, bog asphodel and heather.</p> <p>The site is also notable for a small population of grass of parnassus which is local on Anglesey. Lesser skullcap and marsh gentian have also been recorded in 2013.</p>	922 m north-east	Included – pathway for hydrological effects.
Coed Bodafon-y-Glyn CWS	<p>A small broadleaved wood dominated by hazel (<i>Corylus avellana</i>) and willow on the lower slopes of Mynydd Bodafon (mountain). A small area of marshy grassland bounds the northern edge of the wood. There are many woodland herbs present. In the drier parts bluebells, wood sorrel, common dog violet, enchanter's nightshade and primrose are abundant. Wetter parts have abundant water mint, marsh marigold and tufted sedge beneath alders. Water avens (<i>Geum rivale</i>), a very local species on Anglesey, is recorded at this site.</p>	1.14 km north-east	Excluded - no pathways for effects have been identified.
Rhostir Ponciau CWS	<p>This site consists of an area of wet heathland with two small areas of marshy grassland. To the north of the site succession has started to occur and secondary woodland is forming.</p> <p>The heath has dominant cross-leaved heath, heather and western gorse, with abundant purple moor-grass, deer grass, Sphagnum moss and also many-stalked spike-rush. There is a large colony of marsh gentian, a nationally rare species which occurs in Wales only on Anglesey. The site also has a rich mammal and insect fauna.</p>	1.60 km north-east	Included – pathway for hydrological effects.
Gors Frigan CWS	<p>A wet woodland mosaic of natural alder, willow and birch carr with some planted conifers and exotic shrubs. Open wetland vegetation includes stands of blunt-flowered rush with marsh cinquefoil and bogbean, black bog-rush and purple moor-grass.</p>	1.79 km north-east	Excluded - no pathways for effects have been identified.
Llyn Llwyn-Crwn a Sgarp Caerhos Lligwy CWS	<p>A composite site, consisting of a long strip of woodland (Ogo Dano), a small area of unimproved pasture and an area of wet woodland (Llyn Llwyn-Crwn). Ogo Dano is a north-westerly facing limestone escarpment, largely covered in tall dense hazel scrub. Ash, hawthorn and blackthorn are present. Ground flora includes primrose, bluebell, wood sorrel, enchanter's nightshade and many fern species. More open areas including one area of semi-improved calcareous grassland and many steep rocky faces support species-rich grassland with abundant common rockrose, burnet rose, bloody cranesbill, salad burnet, marjoram, harebell and wild thyme. A narrow damp wooded valley bisects the escarpment with ash, sycamore, elm and wild cherry. The rare herb paris is abundant.</p> <p>Llyn Llwyn-Crwn is a wet basin with dominant dense alder, grey sallow and birch in the centre grading to sycamore and ash. Sedge species, yellow flag, common reeds and reed canary-grass are abundant in the wet areas.</p>	1.82 km north-east	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	Elsewhere, marsh thistle, tufted hair grass, angelica and ferns are abundant. Within the woodland areas of neutral grassland occur together with an adjacent area of marshy grassland. Herb paris is abundant locally. There is an area of hazel coppice over limestone pavement at the south-east corner. This has abundant ramsons, dog's mercury, primroses and lady's mantle and herb paris.		
Chwarel Frigan CWS	A small disused limestone quarry with scrub on the eastern edge and a small pond along the base of the quarry face. The scrub is dominated by hazel, with herb bennet and hart's tongue fern in the ground flora. Much of the quarry floor has been degraded from lowland basic grassland and marshy grassland probably due to dumping. This site forms part of the hydrological unit for Cors Erddreiniog SSSI and has a rich invertebrate fauna, including a large colony of the ant ( <i>Myrmica rubra</i> ).	1.93 km east	Excluded - no pathways for effects have been identified.
Cors Goch NWWT	Cors Goch is Anglesey's most complete fen basin. A mosaic of habitats are present including limestone grassland, acid grasslands and heath lands, meadows, pasture, woodland and scrub. These habitats support a wide variety of flora and fauna species, including ten species of orchid, 15 species of dragonfly and over 19 species of butterfly. Birds include sedge warbler, reed bunting and barn owl. This designated site forms part of the Corsydd Mon/Anglesey Fens SAC and Corsydd Mon A Llyn/Anglesey and Llyn Fens Ramsar but further away than the Cors Erddreiniog SSSI/NNR Section.	1.3 km north-east	Excluded, no pathways for effects have been identified. Distance from the Proposed Development exceeds the likely foraging and breeding range of the bird species present. Barn owl is likely to hunt over the marsh and is unlikely to interact with the OHL.
Ancient Woodland	There are seven sites of ancient semi natural woodland, 13 sites of restored ancient woodland and one site of plantation on ancient woodland within the study area of Section C.	Between within the Order Limits and 1.96 km	Included – pathway for indirect effects.
<b>Section D</b>			
Caeau Talwrn SSSI	Caeau Talwrn are of special interest for their neutral grassland and mire vegetation. The site comprises a complex of small enclosures to the south and west of the village of Talwrn situated on glacial drift in the upper catchment of the Afon Cefni. The heterogeneous nature of the drift and topography together with the local occurrence of base-rich springs and seepage lines has given rise to a complex mosaic of vegetation types varying with the impedance of the drainage. The vegetation of this site is of particular interest as it includes not only dry neutral grasslands and various types of mire especially rich-fen, fen-meadow and rush pasture, but also shows the transitions between the various types particularly well. The dry grasslands are largely restricted to the enclosures to the south of the village. These are of the crested dog's-tail ( <i>Cynosurus cristatus</i> ) - black knapweed ( <i>Centaurea nigra</i> ) type and include two different sub-communities: meadow vetchling ( <i>Lathyrus pratensis</i> ) and the heath grass ( <i>Danthonia decumbens</i> ). These grasslands support a profusion of grasses and herbs. Amongst the most prominent grasses are common bent ( <i>Agrostis capillaris</i> ), crested dog's-tail and red fescue ( <i>Festuca rubra</i> ) while herbs include black knapweed, autumn hawkbit ( <i>Leontodon autumnalis</i> ), common bird's-foot trefoil ( <i>Lotus corniculatus</i> ) and red clover ( <i>Trifolium pratense</i> ). The locally uncommon fern adder's tongue ( <i>Ophioglossum vulgatum</i> ) is found within the meadow vetchling sub-	25 m (several split sites). Up to 200 m back from the Haul Road through Section D	Included – pathway for hydrological effects, water quality effects and air quality through dust generation and deposition.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>community while smooth brome <i>Bromus racemosus</i> occurs locally within both sub-communities. These grasslands gradually merge into wetland communities as species such as ragged robin (<i>Lychnis flos-cuculi</i>), rushes <i>Juncus spp.</i>, purple moor-grass and meadowsweet (<i>Filipendula ulmaria</i>) become more prevalent.</p> <p>There are extensive areas of purple moor-grass - meadow thistle (<i>Cirsium dissectum</i>) fen-meadow in the east of this site; these are dominated by purple moor-grass with frequent small sedges such as tawny sedge (<i>Carex hostiana</i>) and flea sedge (<i>Carex pulicaris</i>). Despite the name of this community, meadow thistle is not found here. Where the ground is flushed with base-rich water, particularly in the north-western fields, black bog-rush is found in stands of black bog-rush - blunt-flowered rush mire. Locally uncommon species such as fragrant orchid (<i>Gymnadenia conopsea</i>) and marsh helleborine (<i>Epipactis palustris</i>) can be found in this area.</p> <p>The wetter areas of land with a high water table are dominated by blunt-flowered rush which forms the main component of blunt-flowered rush - marsh thistle (<i>Cirsium palustre</i>) fen-meadow. Within these areas meadowsweet is locally abundant and species such as wild angelica and sneezewort (<i>Achillea ptarmica</i>) are frequent.</p> <p>Other forms of rush pasture within this site, are dominated by soft rush (<i>Juncus effusus</i>) and, more locally, hard rush (<i>Juncus inflexus</i>) with a wide range of other species including greater bird's-foot trefoil (<i>Lotus uliginosus</i>) fleawort (<i>Pulicaria dysenterica</i>) and purple loosestrife (<i>Lythrum salicaria</i>).</p> <p>In the southern part of this site the hedge banks support excellent populations of <i>Aquilegia vulgaris</i>.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• marshy grassland;</li> <li>• men (wetland);</li> <li>• dry neutral grassland; and</li> <li>• mosaic of wetland and grassland habitats showing the transition between different types.</li> </ul> <p>In addition, areas of scrub and hedgerows contribute to the special interest.</p>		
Cors Y Farl SSSI	<p>Cors y Farl is one of the nationally important calcareous fens in Anglesey. It is relatively small but probably the most intact example of this habitat in North Wales.</p> <p>The fen has developed in a basin on the Carboniferous Limestone and its development appears to have been little modified by drainage and associated activities. There is a large stand of swamp vegetation dominated by the great fen-sedge in the central part of the mire. On the soligenous margins of the fen a community in which the black bog-rush is characteristically abundant is well developed in places. In other parts of the mire there are vegetation types present in which a variety of other fen sedges and the blunt-flowered rush are dominant. Cors y Farl is also noted for its rich insect fauna which includes several rare and uncommon species.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• lime-rich fen wetland; and</li> <li>• swamp.</li> </ul>	362 m east	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	In addition, a stream and small areas of scrub and broadleaved woodland contribute to the special interest.		
Cors Bodeilio SSSI	<p>Cors Bodeilio is a nationally important calcareous mire situated in a shallow valley between Pentraeth and Llangefni. The mire is supplied with base-rich water from the surrounding Carboniferous Limestone which has promoted the development of a range of rich-fen vegetation communities that now overlie a body of fen peat.</p> <p>The structure of the vegetation varies in different sections of the valley mire and fen species including mainly great fen-sedge, black-bog rush, blunt-flowered rush, common reed, sweet gale and purple moor grass are dominant or co-dominant over large areas. Other sedge communities also occur and in places characteristic fen bryophyte carpets are well-developed. A notable feature of Cors Bodeilio is its rich orchid flora which includes the uncommon narrow-leaved marsh orchid and fly orchid growing here in Schoenus communities. The fen also supports a diverse invertebrate fauna with a variety of rare and uncommon species; it is particularly rich in Diptera (true flies), aquatic Coleoptera (beetles) and Lepidoptera (moths).</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>lime-rich fen, characterised by tall sedges such as great fen sedge and bottle brush sedge (<i>Carex comosa</i>);</li> <li>lime-rich fen fed by springs and flushes;</li> <li>uncommon plants including fen pondweed (<i>Potamogeton coloratus</i>), many species of stonewort and a good range of orchids including the narrow-leaved marsh orchid (<i>Dactylorhiza traunsteineri</i>) and fly orchid; and</li> <li>populations of uncommon invertebrates including two rare fly species, the medicinal leech and the variable damselfly (<i>Coenagrion pulchellum</i>).</li> </ul> <p>In addition, hedgerows, areas of scrub, grassland, pools and ditches contribute to the special interest.</p> <p>Part of the site is also managed as a NNR (see below).</p>	1.17 km south-east	Excluded - no pathways for effects have been identified.
Gwenfro and Rhos Y Gad SSSI	<p>This site has been selected primarily as an example of a rich-fen habitat, which supports certain nationally uncommon vegetation types.</p> <p>Gwenfro and Rhos y Gad comprises two distinct wetland areas which are linked hydrologically. Both sections are supplied with base-rich water and support a range of rich-fen mire and meadow plant communities. In the Gwenfro compartment stands of tall fen vegetation, with species such as saw sedge and tufted sedge (<i>Carex elata</i>), are present together with fen scrub and meadow communities. The latter meadow vegetation, in which species such as black bog rush, blunt-flowered rush and purple moor-grass are often abundant, also occurs in the Rhos y Gad section where it is notably species-rich in places; a variety of associated species are present, including yellow sedge (<i>Carex lepidocarpa</i>), saw-wort (<i>Serratula tinctoria</i>), petty whin (<i>Genista anglica</i>), fly orchid, lesser butterfly orchid (<i>Platanthera bifolia</i>) and lesser club moss. There are also populations of three nationally uncommon plant species: narrow-leaved marsh orchid, fen pondweed and marsh dandelion (<i>Taraxacum palustre</i>).</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>swamp, characterised by great fen sedge and tufted sedge (<i>Carex ericetorum</i>);</li> <li>fen meadow characterised by black bog rush, blunt flowered rush and purple moor grass;</li> </ul>	1.95 km north-east	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<ul style="list-style-type: none"> <li>narrow leaved marsh orchid, fen pondweed and marsh dandelion; and</li> <li>medicinal leech.</li> </ul> <p>In addition, hedgerows, ponds, streams, small rock outcrops and scrub contribute to the special interest.</p>		
Cors Bodeilio NNR	A large rich fen system which is part of a suite of wetlands designated for their unusual and diverse vegetation. The fen is characterised by stands of common reed, great fen sedge, blunt flowered rush and black bog rush. Orchids, insectivorous plants, rare stoneworts, dragonflies, medicinal leech and grasshopper warblers ( <i>Locustella naevia</i> ).	1.23 km east	Excluded - no pathways for effects have been identified.
Nant Y Pandy (The Dingle) LNR	A wooded valley dominated by sessile oak ( <i>Quercus petraea</i> ), ash and wild cherry ( <i>Prunus avium</i> ) with bluebells ( <i>Hyacinthoides non-scripta</i> ) and wood anemones ( <i>Anemone nemorosa</i> ) present in the ground flora. Reptiles and amphibians have been recorded, in addition to a diverse range of invertebrate species. Bird interest at the site includes: blue tit ( <i>Cyanistes caeruleus</i> ), great tit ( <i>Parus major</i> ), moorhen ( <i>Gallinula chloropus</i> ), wren ( <i>Troglodytes troglodytes</i> ), grey wagtail ( <i>Motacilla cinerea</i> ), kingfisher ( <i>Alcedo atthis</i> ), dipper ( <i>Cinclus cinclus</i> ) and tawny owl ( <i>Strix aluco</i> ).	1.8 km west	Excluded - no pathways for effects have been identified as does not fall within the within the study area for the air quality assessment. Distance from proposed development exceeds the likely foraging range of the bird species listed.
Gorchudden Gylched Covert CWS	An area of semi-natural woodland over a small limestone hill with hawthorn ( <i>Crataegus monogyna</i> ), blackthorn ( <i>Prunus spinosa</i> ) and gorse scrub and dense bracken ( <i>Pteridium</i> sp.). Ash, sycamore and beech are locally dominant trees with birch and alder on the very wet area. Scots pine ( <i>Pinus sylvestris</i> ), hazel and elm are occasional with holly ( <i>Ilex aquifolium</i> ), rowan ( <i>Sorbus aucuparia</i> ), and willows abundant in the understorey. Herb species, on badly poached ground, include sanicle, wood anemone, wood sorrel, bugle, lesser celandine, bluebells, herb bennet and angelica. In wet areas, purple moor grass, black bog rush, rushes and water mint are found. Hart's tongue fern and ivy are abundant in the old quarries.	Within the Order Limits	Included – could be direct effects through loss of habitat and pathways for indirect effects including air quality due to dust generation and deposition.
Tir Pori Talwrn CWS	The CWS is split into three main sections by Caeau Talwrn SSSI and is a mosaic of semi-improved neutral grassland, marshy grassland, basic flush and scattered scrub. The neutral grassland has ribwort plantain, autumn hawkbit, eyebright, red clover, common knapweed, birdsfoot trefoil, bents, crested dog's-tail, sweet vernal grass and red fescue. There is also present a much less common type of this grassland with frequent tormentil and heath-grass. The basic flushes are small and have black bog-rush, blunt-flowered rush, red fescue and Yorkshire fog associated with quaking grass, butterwort, saw-wort, heath-grass, tormentil and small sedges. These include tawny sedge which is local on Anglesey. The marshy grassland has frequent blunt-flowered rush, meadowsweet, angelica, common valerian, marsh horsetail, purple moor-grass and marsh pennywort. In places the purple moor grass becomes dominant. The scattered scrub consists of common gorse and hawthorn. Uncommon species at this site include marsh helleborine, adder's-tongue ( <i>Erythronium multiscapoideum</i> ), early marsh orchid ( <i>Dactylorhiza incarnate</i> ), petty whin and grass of parnassus.	151 m east	Included – pathway for hydrological effects, water quality effects and air quality effects.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Clegyrdy Bach/Neuadd Wen/Ty'n Beudy CWS	<p>This site is in two separate areas with species-rich marshy grassland, valley mire, basic flush and a small area of woodland. The valley mire is floristically similar to the basic flush but covers a larger area. Uncommon plants include marsh helleborine, petty whin and whorl grass (<i>Catabrosa aquatica</i>).</p> <p>The marshy grassland is species-rich and has a continuous cover of blunt-flowered rush associated with purple moor-grass, rough meadow-grass, red fescue, meadow buttercup, common knapweed, common mouse-ear as well as angelica, water mint, hemp agrimony and marsh thistle. Hard rush is locally abundant here. The marshy grassland grades into basic flush and valley mire. The valley mire is floristically similar to the basic flush but covers a larger area. This type of vegetation has tussocks of black bog-rush and purple moor-grass with damp runnels between which have small sedges and brown mosses. Other prominent species include blunt-flowered rush, carnation sedge, butterwort, devil's-bit scabious and tormentil. Also present are quaking grass, common spotted orchid, saw-wort, grass of parnassus and tawny sedge - the last two species are local on Anglesey.</p> <p>Small areas of semi-improved neutral grassland occur with crested dog's-tail, red fescue, sweet vernal grass, common knapweed, greater birdsfoot trefoil, cat's-ear and locally purging flax and quaking grass.</p>	226 m east (composite site, parts also lie to the west)	Excluded- no pathways for effects have been identified.
Cors Tregarnedd Fawr CWS	<p>A large site with botanical and ornithological interest. The site has a large area of marshy grassland dominated by rushes and also an area of species-poor rush-dominated improved pasture which is an important habitat for numbers of breeding and wintering birds. The northern part of the site has a mosaic of grazed and ungrazed marshy grassland, swamp and willow carr and there is also a small area of trees to the far north-east, and a lake in the north-west. Parts of the swamp vegetation have reed canary-grass, reed sweet-grass and tall herb vegetation with angelica, meadowsweet, common reed and lesser pond-sedge. The largest stand of reed sweet-grass swamp in north-west Wales occurs here also.</p> <p>Birds recorded breeding on this site include mute swan (<i>Cygnus olor</i>), snipe (<i>Gallinago gallinago</i>), curlew (<i>Numenius arquata</i>), lapwing (<i>Vanellus vanellus</i>), grasshopper warbler, sedge warbler (<i>Acrocephalus schoenobaenus</i>), reed bunting (<i>Emberiza schoeniclus</i>) and blackcap. The site is also a hunting ground for barn owl (<i>Tyto alba</i>) and marsh harrier (<i>Circus aeruginosus</i>).</p>	698 m south-west  Adjacent to construction traffic route	Included – pathway for hydrological effects and air quality through construction traffic emissions and dust generation and deposition. Included for Birds - Immediately adjacent to, and continuous with, Malltraeth Marsh SSSI. Potential for movements of birds between this site and other locations on Anglesey, and interactions with the Proposed Development.
Y Dingle CWS	<p>An area of mixed woodland in the steep-sided valley of the Afon Cefni with a small area of adjoining semi-improved neutral grassland. The canopy has abundant sessile oak and wych elm with frequent sycamore, beech and sweet chestnut. Scots pine is also present. Wild cherry, only locally distributed on Anglesey, occurs in both the canopy and shrub layer. The latter has abundant regenerating wych elm and sycamore with hawthorn, holly and hazel also occurring. The area of semi-improved neutral grassland is species-rich with ox-eye daisy, yellow rattle, purging flax, red bartsia and common spotted-orchid.</p> <p>The site is good for woodland birds including green woodpecker (<i>Picus viridis</i>) and blackcap (<i>Sylvia atricapilla</i>).</p>	1.84 km west  Adjacent to construction traffic route	Excluded - no pathways for effects have been identified as does not fall within the within the study area for the air quality assessment.  Excluded for Birds - this overlaps Nant y Pandy (The Dingle) LNR. Distance from proposed development exceeds the likely foraging range of the species listed.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Ancient Woodland	There are seven sites of ancient semi natural woodland, three sites of restored ancient woodland and one site of plantation on ancient woodland within the study area of Section D.	Between 370 m and 1.9 km	Excluded - no pathways for effects have been identified.
<b>Section E</b>			
Cors Bod-Ynys CWS	<p>A large area of marshy grassland in a shallow depression with a small wet woodland and scattered scrub. The central part although very wet is occupied by willow scrub with abundant bog myrtle. The marshy grassland is dominated by rushes, sedges and grasses and is also herb-rich. These include bogbean, marsh cinquefoil, angelica, marsh marigold, meadowsweet, marsh bedstraw, ragged robin, gipsywort, watermint and common spotted and northern marsh orchids. The south-eastern part of the site has been improved agriculturally since 1983 and has been removed from the revised site. There are ditches and streams crossing the site which are filled with reeds, bulrush, bur-reed (<i>Sparganium</i> sp.) and starwort (<i>Callitriche stagnalis</i>). There is a small wet alder wood near the south-western corner of the site which has a grassy ground flora including red campion, common lady fern and marsh marigold. The scattered scrub across the site is composed mainly of willow but also some common gorse.</p> <p>This site is important for its ornithological interest and has breeding curlew, lapwing, snipe, grasshopper warbler, sedge warbler and reed bunting.</p>	1.37 km north Within 200 m of construction traffic route	<p>Excluded - no pathways for effects have been identified as does not fall within the within the study area for the air quality assessment.</p> <p>Birds – Excluded due to distance from the Order Limits exceeds the likely foraging distance of species present.</p>
Ancient Woodland	There are five sites of ancient semi natural woodland and one site of restored ancient woodland within the study area of Section E.	Between 248 m and 1.7 km	Excluded - no pathways for effects have been identified.
<b>Section F</b>			
Y Fenai a Bae Conwy/Menai Strait and Conwy Bay SAC	<p>Annex I habitats - Primary reason for SAC selection: Sandbanks which are slightly covered by sea water all of the time; Mudflats and sandflats not covered by seawater at low tide; and Reefs.</p> <p>Annex I habitats - Qualifying feature for SAC selection: Large shallow inlets and bays; and Submerged or partially submerged sea caves.</p>	Within the Order Limits – tunnel section	<p>Included – potential for blowout of drilling slurry that could cause loss of benthic habitat from areas of seabed affected. Furthermore, contamination from drilling fluids may occur in the waters overlying this area which may affect habitats and species inhabiting the vicinity.</p> <p>Annex I habitats not affected (owing to their position in relation to the order limits and no pathway for effects) and therefore nor considered further are: Sandbanks which are slightly covered by seawater all of the time; Large shallow inlets and bays; and Submerged or</p>

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
			partially submerged seacaves. Contamination via the Afon Braint has been assessed as not significant within the Water Quality chapter and therefore is not included as an effect.
Coedydd Afon Menai SSSI	<p>Coedydd Afon Menai is a representative example of an ivy-oak/ash <i>Hedera Helix</i> - <i>Quercus</i>/<i>Fraxinus</i> type woodland.</p> <p>It consists of narrow strips of broadleaved woodland along sections of the southern shore of the Menai Strait. The woodland largely occurs on steep, sometimes rocky slopes although flatter sections of interesting woodland above the slope are included.</p> <p>The most northerly section of woodland (Coed Siliwen) is dominated by sessile oak (<i>Quercus petraea</i>) in the canopy and great wood-rush (<i>Luzula sylvatica</i>) in the ground flora. Wild service tree (<i>Sorbus torminalis</i>), a rarity in Gwynedd, occurs here. Around Nantporth the woodland is associated with Carboniferous Limestone. Here ash (<i>Fraxinus excelsior</i>) with wych elm (<i>Ulmus glabra</i>) and sessile oak dominate the canopy and hazel (<i>Corylus avellana</i>) the understorey. Dog's mercury (<i>Mercurialis perennis</i>), woodruff (<i>Galium odoratum</i>) and enchanter's-nightshade (<i>Circaea lutetiana</i>) are abundant in the ground flora.</p> <p>The special feature of the SSSI is:</p> <ul style="list-style-type: none"> <li>ivy-oak/ash (<i>Hedera helix</i> – <i>Quercus</i>/<i>Fraxinus</i>) type woodland. Comprises narrow strip of woodland along a section of the southern shore of the Menai Strait. The woodland largely occurs on steep, sometimes rocky slopes although flatter sections of interesting woodland above the slope are also present.</li> </ul>	707 m north-east Also adjacent to the A55 Menai crossing construction traffic route, therefore within the study area for the air quality assessment	Included – pathway for air quality as it lies within the study area for the air quality assessment.
Glannau Porthaethwy SSSI	<p>The site extends along 4 km of the shore of Menai Bridge/Porthaethwy in the Menai Strait from Britannia Bridge to Craig y Don, and has been selected for its marine biological features. This south-east facing shore is sheltered from wave-action and consists of a mixture of mud, bedrock, pebbles, cobbles and boulders. The shores of the islands of Ynys Gorad Goch, Ynys Welltog, Ynys Benlas, Ynys Tysilio, Half Tide Rock, Ynys Faelog, Ynys Tobig, Ynys Gaint, Ynys Castell and Ynys y Big are also included in the site.</p> <p>The shore is of special interest as it is the most extensive sheltered rock shore in the area between Bardsey Island and Great Orme's Head and because it supports the greatest diversity of marine plant and animal communities on this type of shore within this area. The shore is also important for the presence of five marine communities of restricted national distribution, five diverse rockpool and overhang communities, and for exhibiting the most comprehensive community zonation characteristic of sheltered rocky shores.</p> <p>In areas such as Ynys Welltog and beneath the Menai Bridge, rocky shore communities form visible 'zones' down the shore. Such patterns of zonation are the result of different species' tolerances to desiccation, temperature extremes and sunlight and their differing abilities to compete with other species for space. Above mean high water, rock surfaces subject to sea-spray support a zone of yellow and grey lichens. Beneath this zone the black-tar lichen (<i>Verrucaria maura</i>) grows on bedrock, cobbles and pebbles, forming a wide band. A band of channel wrack</p>	1.41 km north-east Adjacent to the A55 construction route crossing over the Menai Strait (Link 21).	Included – due to potential for blowout of drilling slurry that could cause contamination from drilling fluids may occur in the waters overlying this area which may affect habitats and species inhabiting the vicinity.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>(<i>Pelvetia canaliculata</i>) and spiral wrack (<i>Fucus spiralis</i>) occurs just below this level, followed by successive zones lower down the shore of knotted wrack (<i>Ascophyllum nodosum</i>), bladder wrack (<i>Fucus vesiculosus</i>), and serrated wrack (<i>Fucus serratus</i>). Mixed kelps such as oarweed (<i>Laminaria digitate</i>), sugar kelp (<i>Laminaria saccharina</i>) and cuvie (<i>Laminaria hyperborean</i>) dominate the lower reaches of the shore in a narrow band, with a diverse range of associated seaweeds including sea-oak (<i>Halidrys siliquosa</i>), bootlace weed (<i>Chorda filum</i>), and the red seaweeds <i>Cystoclonium purpureum</i>, <i>Cryptopleura ramosa</i>, <i>Phycodrys rubens</i> and species of <i>Ceramium</i>.</p> <p>The area of the Menai Strait known as the Swellies experiences strong tidal currents of up to 8 knots during spring tides and, as a result, supports a wide range of filter-feeding animals, including four tide-swept communities of restricted national distribution. After the Menai Strait, the second largest concentration of these communities in Wales is within Milford Haven, with a few small patches of certain of these communities on the Gower Peninsula, Ramsey Island and St. Tudwal's East. These tide-swept communities are individually characterised by knotted wrack, serrated wrack on bedrock, serrated wrack on mixed substrata, or by oarweed, as well as a diverse array of filter-feeding animals. Such species, occurring on seaweeds and rock surfaces, include the sponges <i>Hymeniacidon perleve</i> and <i>Esperiopsis fucorum</i>, the bryozoans <i>Dynamena pumila</i>, <i>Flustrellidra hispida</i>, <i>Membranipora membranacea</i> and <i>Bugula plumosa</i>, the ascidian <i>Botryllus leachi</i> and star ascidian (<i>Botryllus schlosseri</i>), and hydroids. Near Church Island an abundant population of the daisy anemone (<i>Cereus pedunculatus</i>) is associated with the tide-swept oarweed community. Another unusual community – species of small marine worms and molluscs in sheltered muddy gravel – is found at three locations along this shore. In Wales, this community is restricted to the Menai Strait and Milford Haven.</p> <p>Distinct communities of plants and animals inhabiting rockpools and the surfaces under rock overhangs are particularly diverse on this shore. Sediment-floored rockpools with furoids and kelps and hydroid-dominated pools on mixed substrata are present throughout the site. Deeper rockpools dominated by serrated wrack and oarweed are found on the shore between the two bridges, and on Ynys Gorad Goch. Overhanging surfaces on the Menai Suspension Bridge support a diverse community that includes purse sponge (<i>Grantia compressa</i>), breadcrumb sponge (<i>Halichondria panacea</i>), the sponge <i>Ophilitaspongia seriata</i> and the red seaweeds <i>Lomentaria articulata</i>, <i>Membranoptera alata</i>, and dulse (<i>Palmaria palmata</i>). Other lower shore rock overhangs on the site support a diverse community of filter-feeding animals, such as sponges, ascidians and bryozoans. Species commonly found here include the sponges <i>Hymeniacidon perleve</i>, <i>Haliclona rosea</i> and breadcrumb sponge, the bryozoan <i>Dynamena pumila</i>, dahlia anemone (<i>Urticina feline</i>), plumose anemone (<i>Metridium senile</i>) and the star ascidian.</p> <p>Owing to its close proximity to Traeth Lafan, an internationally important site for wading birds and wildfowl, relatively undisturbed parts of this shore provide important high tide roost areas for waders that feed at Traeth Lafan and elsewhere in the Menai Strait. For example Ynys y Bîg provides an important roost site for oystercatchers. Additionally, otters have been recorded in and around the Afon Cadnant.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• great diversity of marine plant and animal communities on this shore type between Bardsey Island and Great Orme's Head;</li> <li>• presence of five communities of restricted national distribution:</li> </ul>		

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<ul style="list-style-type: none"> <li>presence of five species-rich specialised communities of marine plants and animals;</li> <li>comprehensive example of sheltered rocky shore community zonation; and</li> <li>the most extensive wave-sheltered rock shore between Bardsey Island and Great Orme's Head.</li> </ul> <p>In addition, maritime cliffs, grasslands and small islands contribute to the special interest.</p>		
Coed Ty'n-llwyn cCWS	Broadleaved woodland and neutral grassland. The site is known for being a gateway to the Swallow Falls waterfall.	Within the Order Limits Within 200 m of construction traffic route	Included – potential for indirect and direct effects including habitat loss.
Vaynol Park woodlands and lake cCWS	Broadleaved woodland and standing water.	Within the Order Limits – tunnel section Within 200 m of construction traffic route	Included – pathway for indirect effects though air quality as lies within the study area for the air quality assessment.
Coed Rhos-fawr cCWS	Coniferous woodland and acid grassland.	Within the Order Limits	Included – potential for indirect and direct effects including habitat loss.
Coed Nant y Garth CWS	Coniferous woodland, broadleaved woodland and acid grassland.	Within the Order Limits Within 200 m of construction traffic route	Included – potential for direct effects including habitat loss.
Coed Pont Ladi-wen CWS	Coniferous woodland.	Within the Order Limits Within 200 m of construction traffic route	Included – pathway for indirect effects through air quality as lies within the study area for the air quality assessment. Habitat loss is unlikely as the Order Limits includes the existing road and small visibility splay not extending into the woodland.
Parc Nant-y-garth cCWS	Coniferous woodland.	Within the Order Limits Within 200 m of	Included – pathway for indirect effects through air quality through construction traffic emissions and dust generation

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
		construction traffic route	and deposition.
Fodol Ganol cCWS	Broadleaved woodland.	Within the Order Limits – tunnel section Within 200 m of construction traffic route	Included – pathway for indirect effects through air quality through construction traffic emissions and dust generation and deposition.
Pentir Substation cCWS	Coniferous woodland and broadleaved woodland.	Within the Order Limits	Included – potential for indirect and direct effects including habitat loss.
Vaynol Wood CWS	Broadleaved woodland.	5.4 m north-east	Excluded – no pathways for effects have been identified as lies within tunnel Order Limits.
Tyddyn Forgan cCWS	Semi-improved neutral grassland.	251 m south-west	Excluded - no pathways for effects have been identified.
Coed Penrallt CWS	Broadleaved woodland.	261 m south-west	Excluded - no pathways for effects have been identified.
Glan-rhyd Reservoir cCWS	Standing water, semi-improved neutral grassland and marshy grassland.	335 m south-east Within 200 m of construction traffic route	Included – pathway for indirect effects through air quality through construction traffic emissions and dust generation and deposition.
Parc Menai Woodlands cCWS	Broadleaved woodland.	353 m north-east Within 200 m of construction traffic route	Included – pathway for indirect effects through air quality through construction traffic emissions and dust generation and deposition.
Tyddyn-Heilyn CWS	Semi-improved neutral grassland, swamp and marshy grassland.	455 m north	Excluded - no pathways for effects have been identified.
Tan-yr-Wylfa cCWS	Coniferous woodland.	486 m south	Excluded - no pathways for effects have been identified.
Coed Tyddyn Badyd cCWS	Broadleaved woodland.	585 m south-east Within 200 m of	Included – pathway for indirect effects through air quality

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
		construction traffic route	through construction traffic emissions and dust generation and deposition.
Ty'n-llwyn cCWS	Broadleaved woodland and acid grassland.	598 m south- east	Excluded - no pathways for effects have been identified.
Coed Bryncelli Ddu CWS	A small broadleaved wood comprising hazel coppice, with standards of several species: ash, beech, wych elm, sycamore and sessile oak. There is a sparse understorey of hawthorn and blackthorn, with a band of dense rhododendron bushes across the eastern end of the wood. The site is low-lying, by the Afon Braint, and the ground flora is rich and varied, with abundant early purple orchids. Seven species of fern are present, also wild cherry and alder. The dry ditches contain yellow flag ( <i>Iris pseudacorus</i> ) and marsh marigold.	610 m south-west	Excluded - no pathways for effects have been identified.
Seion cCWS	Semi-improved neutral grassland and marshy grassland.	714 m south-west	Excluded - no pathways for effects have been identified.
Coed yr Ardd CWS	Large, mixed woodland of partly semi-natural origin. The main area of semi-natural woodland has co-dominant sycamore, ash, beech, sessile oak and wych elm. The shrub layer varies widely across the site. In parts there is invasive rhododendron, in others elder, hawthorn and hazel and yet others little shrub growth. The ground cover is rich and varied including abundant ramsons ( <i>Allium ursinum</i> ), bluebells, many ferns and occasional early purple orchids ( <i>Orchis mascula</i> ). This woodland is rich in bird life and Lepidoptera.	720 m south-west	Excluded - no pathways for effects have been identified. Distance from Proposed Development exceeds likely foraging distance of woodland birds.
Mausoleum woodland and pasture CWS	Broadleaved woodland and neutral grassland.	732 m north-east	Excluded - no pathways for effects have been identified.
Ynysllecharian-bach cCWS	Broadleaved woodland, acid grassland, semi-improved neutral grassland and marshy grassland.	754 m south	Excluded - no pathways for effects have been identified.
Coed Pant-yr-afallen cCWS	Coniferous woodland and broadleaved woodland.	803 m south-west	Excluded - no pathways for effects have been identified.
Fachell cCWS	Broadleaved woodland.	844 m south-west	Excluded - no pathways for effects have been identified.
Coed Wern cCWS	Broadleaved woodland.	851 m north	Excluded - no pathways for effects have been identified.
Llwyn Chwarel-Goch CWS	A long-disused limestone quarry on the Menai Straits shore, containing sycamore woodland, with older broadleaved woodland along the coastal edge, also small areas of maritime grassland and salt-marsh, the latter in small coves created by quarrying. The sycamore woodland is growing on sharply undulating spoil heaps, covered in ivy with abundant and luxuriant ferns, particularly hart's-tongue fern. The coastal strip also contains ash and wych elm, with wood sorrel and wood sanicle in the ground flora. The southern edge of the quarry is more open	898 m south-west	Excluded - no pathways for effects have been identified. Species present are coastal and the Proposed Development would be underground where it

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	and grassy, with rustyback fern which is rare on Anglesey, old man's-beard, false-brome, birds-foot trefoil and wild strawberry. There is a hybrid swarm of primroses and cowslips. The site has good bird populations including wintering greenshank ( <i>Tringa nebularia</i> ), breeding shelduck ( <i>Tadorna tadorna</i> ), and a small heronry.		crosses the Menai Strait. There would be no impacts on these species.
Ty-mawr cCWS	Marshy grassland and acid grassland.	969 m south-west	Excluded - no pathways for effects have been identified.
Ty'n y Rhos cCWS	Marshy grassland, broadleaved woodland and standing water.	977 m south-west	Excluded - no pathways for effects have been identified.
Coed Pant-y-cyff cCWS	Broadleaved woodland, coniferous woodland, mixed woodland and semi-improved neutral grassland.	1.00 km south-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Coed Odyn Calch CWS	This woodland is partly broadleaved and partly mixed with relict sycamore coppice at the western end. The dominant broadleaved species are beech, ash, sessile oak, wych elm and sycamore, with larch ( <i>Larix decidua</i> ) and Scots pine locally dominant in the eastern portion. There are some fine mature trees, and a rich ground flora, with luxuriant ferns of six species under the mixed canopy. Here the understorey is dense: elder is abundant with hazel, elm and sycamore saplings. The broad leaved area has a patchier under-storey, with dog's mercury, wood anemone and lesser celandine abundant in the ground flora. In addition, sweet violet and early dog violet (the latter very local on Anglesey) are abundant in the coppice area, as are primroses and moschatel.	1.04 km south-west	Excluded - no pathways for effects have been identified.
Ynys Iago cCWS	Semi-improved neutral grassland and broadleaved woodland.	1.04 km south-east	Excluded - no pathways for effects have been identified.
Bryniau-heulog CWS	Broadleaved woodland and semi-improved neutral grassland.	1.06 km north	Excluded - as does not lie within the study area for the air quality assessment.
Carfan cCWS	Semi-improved neutral grassland.	1.10 km south-east	Excluded - no pathways for effects have been identified.
Coed Braint/Siglen/Dyfnia CWS	A wet basin with two woodlands, marshy grassland, reed beds and a river. The large area of reeds, herb-rich in places, has abundant bogbean, marsh lousewort, round-leaved sundew, marsh marigold, marsh arrow-grass, purple moor-grass, common spotted and northern marsh orchids. The marshy grassland has abundant purple moor-grass, tufted hair grass and soft rush with angelica, watermint and skull cap also present. It extends northwards along the northern bank of the river and reaches upslope to an area of very wet deciduous woodland which has downy birch, alder and grey willow with a good ground flora of tufted hair-grass, soft and hard rushes, marsh marigold, enchanter's nightshade and sanicle. The southern wet woodland has alder, grey sallow and birch with a ground cover of reeds, water mint, purple	1.10 km north-east	Excluded - as does not lie within the study area for the air quality assessment. Birds – excluded due to distance from the Proposed Development exceeding foraging range of breeding species present and is too distant to affect hunting barn

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	loosestrife, ragged robin, reed canary-grass and opposite-leaved golden-saxifrage. The site has breeding grasshopper warbler, sedge warbler, reed bunting, redstart ( <i>Phoenicurus phoenicurus</i> ) and blackcap. Dippers occur along the river and the marshy grassland is a hunting area for barn owls.		owl.
Nr Cefn Gwyn cCWS	Marshy grassland.	1.11 km south	Excluded - no pathways for effects have been identified.
Bach yr Hilfry cCWS	Semi-improved neutral grassland.	1.20 km south	Excluded - no pathways for effects have been identified.
Ty-newydd CWS	Semi-improved neutral grassland and broadleaved woodland.	1.23 km north-east	Excluded - no pathways for effects have been identified.
Goetra Isaf CWS	Broadleaved woodland and semi-improved neutral grassland.	1.26 km north	Excluded - as does not lie within the study area for the air quality assessment.
Coed Rhydau cCWS	Coniferous woodland and broadleaved woodland.	1.31 km south-east	Excluded - no pathways for effects have been identified.
Tyn y Ffridd cCWS	Marshy grassland.	1.35 km east	Excluded - no pathways for effects have been identified.
Treborth Road Woodlands cCWS	Broadleaved woodland and semi-improved neutral grassland.	1.36 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Railway cuttings (Treborth) CWS	Broadleaved woodland.	1.38 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Waen Pentir cCWS	Acid grassland and marshy grassland.	1.60 km south-east	Excluded - no pathways for effects have been identified.
Cyttir Lane Woods CWS	Broadleaved woodland.	1.70 km north-east	Excluded - no pathways for effects have been identified.
Coed Tandinas cCWS	Broadleaved woodland.	1.71 km south-west	Excluded - no pathways for effects have been identified.
Gwyndy CWS	Broadleaved woodland and semi-improved neutral grassland.	1.77 km south	Excluded - no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Treborth Woods CWS	Broadleaved woodland.	1.85 km north-east	Excluded - no pathways for effects have been identified.
Glan y Gors CWS	Acid grassland and marshy grassland.	1.92 km south-east	Excluded - no pathways for effects have been identified.
Tair Ffynnon Uchaf CWS	Semi-improved neutral grassland and broadleaved woodland.	1.92 km north-east	Excluded - no pathways for effects have been identified.
Minffordd to Pant Caerhun CWS	Broadleaved woodland.	1.94 km north-east	Excluded - no pathways for effects have been identified.
Perfeddgoed CWS	Broadleaved woodland.	1.97 km north-east	Excluded - no pathways for effects have been identified.
Ancient Woodland	There are 31 sites of ancient semi natural woodland, 63 sites of restored ancient woodland, 45 sites of plantation on ancient woodland, plus five ancient woodland sites of an unknown category within the study area of Section F.	24 sites fall within the Order Limits	Included - potential for direct effects through loss of habitat, pathways exist for indirect effects.
Wider Area (over 2 km)			
Bae Lerpwl/Liverpool Bay SPA	<p>Qualifying species of the SPA:</p> <ul style="list-style-type: none"> <li>• Little tern (<i>Sternula albifrons</i>): 260 individuals (2010 – 2014), 6.84% of GB population.</li> <li>• Common tern: 360 individuals (2011 – 2015), 1.80% of GB population</li> <li>• Red throated diver (<i>Gavia stellata</i>): 1,171 individuals (2004/05 – 2010/11), 6.89% of GB population.</li> <li>• Common scoter (<i>Melanitta nigra</i>): 56,679 individuals (2004/05 – 2010/11), 10.31% of NW European population.</li> <li>• Little gull (<i>Hydrocoloeus minutus</i>): 319 individuals (2004/05 – 2010/11).</li> </ul> <p>Over winter the site supports an internationally important waterbird assemblage of over 20,000 individuals: 69,687 individuals (2004/05 – 2010/11), all species listed above plus cormorant (<i>Phalacrocorax carbo</i>) and red-breasted merganser (<i>Mergus serrator</i>) as key components.</p> <p>Other species that contribute to the assemblage over winter in numbers &gt;1% of their GB populations or 2,000 individuals are black-headed gull, common gull, common eider, fulmar, great black-backed gull, great crested grebe, guillemot, gannet, herring gull, kittiwake, lesser black-backed gull, great northern diver, puffin, razorbill, shag, velvet scoter.</p>	5.04 km north-east	Included – assessed in relation to the potential for collision risk. Key assemblage species (cormorant) occurs regularly inland over Anglesey and Gwynedd, with foraging ranges up to 30 km.
Traeth Lafan/Lavan Sands and Conwy Bay SPA	<p>Qualifying species of the SPA:</p> <p>Over winter the area supports:</p> <ul style="list-style-type: none"> <li>• Oystercatcher (<i>Haematopus ostralegus</i>): 5,500 individuals during winter, 1.4% of the wintering population in</li> </ul>	5.81 km north-east	Included – assessed in relation to the potential for collision risk. Occurrence of curlew, red – breasted merganser and great –

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>Great Britain (Europe &amp; Northern/Western Africa population) five year peak mean 1991/2 - 1995/6.</p> <ul style="list-style-type: none"> <li>Red-breasted merganser: 120 individuals during winter.</li> <li>Eurasian curlew: 1,500 individuals during winter, 1% of the population in Great Britain based on five year peak mean 1991/92-1995/96.</li> <li>Great crested grebe (<i>Podiceps cristatus</i>): 500 individuals on passage (north-western Europe wintering population).</li> <li>Common redshank (<i>Tringa totanus</i>): 1,200 individuals in winter.</li> </ul>		<p>crested grebe away from the SPA and potential for SPA birds to interact with the Proposed Development.</p>
Glannau Ynys Gybi /Holy Island Coast SPA	<p>Qualifying species of the SPA:</p> <ul style="list-style-type: none"> <li>Breeding: Chough (<i>Pyrrhocorax pyrrhocorax</i>) – 18 pairs representing at least 5.3% of the breeding population in Great Britain (count as at 1998).</li> <li>Overwintering: Chough – 18 pairs representing at least 2.6% of the wintering population in Great Britain (count as at 1998).</li> </ul>	14.94 km south-west	<p>Excluded from the ES and HRA as no pathways for effects have been identified. Distance from the Order Limits exceeds foraging range of chough.</p>
Ynys Seiroil/Puffin Island SPA	<p>Qualifying species of the SPA:</p> <p>During the breeding season: Cormorant – 556 pairs representing at least 1.35% of the breeding north-western Europe population (five year mean for 1996 – 2000).</p>	15.72 km north-east	<p>Included – assessed in relation to the potential for collision risk. Cormorant occurs regularly inland over Anglesey and Gwynedd and along the Menai Strait, with foraging ranges up to 30 km.</p>
Migneint Arenig Dduallt SPA	<p>Qualifying species of the SPA:</p> <p>Breeding populations:</p> <ul style="list-style-type: none"> <li>Hen harrier (<i>Circus cyaneus</i>) 10-12 pairs – at least 2.1% of the GB breeding population (based on five year mean for 1993/1994 – 1997/1998);</li> <li>Merlin (<i>Falco columbarius</i>) 9-12 pairs – at least 0.7% of the GB population (based on five year mean for 1993/1994 – 1997/1998); and</li> <li>Peregrine (<i>Falco peregrinus</i>) 12 pairs – at least 1% of the GB population (based on five year mean for 1993/1994 – 1997/1998).</li> </ul>	27.96 km south-east	<p>Excluded from the ES and HRA as no pathways for effects have been identified</p> <p>Distance from the Order Limits exceeds the foraging distance from nest sites.</p> <p>The home ranges and core feeding areas are sufficiently far away from the Proposed Development that the interest features are unlikely to use supporting habitat with in or adjacent to the Proposed Development. Therefore no pathway to affect any of the interest features of this site.</p>

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Aber Dyfi/Dyfi Estuary SPA	Qualifying species of the SPA: Overwintering populations of Greenland white-fronted goose ( <i>Anser albifrons flavirostris</i> ) – 139 individuals representing at least 1% of the wintering population in the UK (5 year peak mean for 1993/94 – 1997/98).	69.57 km south	Included – assessed in relation to the potential for collision risk. Population of wintering Greenland white-fronted geese on Anglesey at Malltraeth Marsh, with occasional sightings elsewhere on Anglesey.
Eryri/Snowdonia SAC	Annex I habitats - Primary reason for SAC selection: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetetea</i> ; Siliceous alpine and boreal grasslands; Hydrophilous tall herb fringe communities of plains and of the montane to alpine levels; Siliceous scree of the montane to snow levels <i>Androsacetalia alpinae</i> and <i>Galeopsietalia ladani</i> ; Calcareous rocky slopes with chasmophytic vegetation; and Siliceous rocky slopes with chasmophytic vegetation. Annex I habitats - Qualifying feature for SAC selection: Northern Atlantic wet heaths with <i>Erica tetralix</i> ; European dry heaths; Alpine and boreal heaths; Alpine and subalpine calcareous grasslands; Species-rich <i>Nardus</i> grasslands, on silicious substrates in mountain areas; Blanket bogs; Depressions on peat substrate of the <i>Rhychosporion</i> ; Petrifying springs with tufa formation; Alkaline fens; Alpine pioneer formations of the <i>Caricion bicoloris-atrofuscae</i> ; and Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in the British Isles. Annex II species – Primary reason for SAC selection: slender green feather-moss ( <i>Drepanocladus (Hamatocaulis) vernicosus</i> ); and floating water-plantain ( <i>Luronium natans</i> ).	2.6 km south-east and within 10 km of the emergency generators required at the THHs, due to this being an International Site	Included – pathway for air quality through construction phase emergency generator emissions only. Please note that although this is also a SSSI, only the SAC falls within the air quality assessment as lies within 10 km, whereas SSSIs are only assessed where they fall within 2 km.
Afon Gwyrfaï a Llyn Cwellyn SAC	Annex I habitats - Primary reason for SAC selection: Oligotrophic to mesotrophic standing waters with vegetation of the <i>Littorelletea uniflorae</i> and/or of the <i>Isoëto-Nanojuncetetea</i> ; and watercourses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitriche-Batrachion</i> vegetation. Annex II species – Primary reason for the SAC selection: Atlantic salmon; and Floating water-plantain. Annex II species - Qualifying feature for SAC selection: Otter.	8.69 km south-west	Included – there is a pathway through potential effects of EMF during operation and noise during construction on Atlantic salmon and otter. There is also the potential for blowout of drilling slurry that could cause contamination from drilling fluids in the waters overlying this area which may affect Atlantic salmon inhabiting the vicinity.
Glannau Mon: Cors heli/Anglesey Coast Saltmarsh SAC	Annex I habitats - Primary reason for SAC selection: Salicornia and other annuals colonising mud and sand; and Atlantic salt meadows <i>Glauco-Puccinellietalia maritimae</i> . Annex I habitats - Qualifying feature for SAC selection: Estuaries; and Mudflats and sandflats not covered by seawater at low tide.	9.01 km west	Excluded from the ES and HRA as no pathways for effects have been identified.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Y Twyni o Abermenai i Aberffraw/ Abermenai to Aberffraw Dunes SAC	<p>Annex I habitat - Primary reason for SAC selection: Embryonic shifting dunes; Shifting dunes along the shoreline with <i>Ammophila arenaria</i> (white dunes); Fixed coastal dunes with herbaceous vegetation (grey dunes); Dunes with <i>Salix repens ssp. Argentea</i>, <i>Salicion arenariae</i>; and humid dune slacks.</p> <p>Annex I habitats - Qualifying feature for SAC selection: Natural eutrophic lakes with Magnopotamion or Hydrocharition - type vegetation</p> <p>Annex II species - Primary reason for SAC selection: Petalwort (<i>Petalophyllum ralfsii</i>); and Shore dock (<i>Rumex rupestris</i>).</p>	9.49 km west	Excluded from the ES and HRA as no pathways for effects have been identified.
Llyn Dinam SAC	Annex I habitats – Primary reason for SAC selection: Natural eutrophic lakes with <i>Magnopotamion</i> or <i>Hydrocharition</i> -type vegetation.	14.16 km west	Excluded from the ES and HRA as no pathways for effects have been identified.
Pen Llyn a'r Sarnau/Lleyn Peninsula and the Sarnau SAC	<p>Annex I habitats - Primary reason for SAC selection: Sandflats which are slightly covered by seawater all the time; Estuaries; Coastal lagoons (Priority feature); Large shallow inlets and bays; and Reefs.</p> <p>Annex I habitats - Qualifying feature for SAC selection: Mudflats and sandflats not covered by seawater at low tide; Salicornia and other annuals colonising mud and sand; Atlantic salt meadows <i>Glaucopuccinellietalia maritima</i>; and Submerged or partially submerged sea caves.</p> <p>Annex II species - Qualifying feature for SAC selection: Bottlenose dolphin (<i>Tursiops truncatus</i>); otter; and grey seal (<i>Halichoerus grypus</i>).</p>	28.31 km south-west	<p>Included - there is a pathway through potential effects of EMF during operation and noise during construction on the bottlenose dolphin and grey seal only.</p> <p>Mammals associated with this designated site have not been identified as being sensitive to contamination from blowout of drilling slurry and therefore this effect is not considered further.</p> <p>The following habitats and species are too distant to be subject to effects from the tunnel activities and are therefore excluded: Sandflats which are slightly covered by seawater all the time; Estuaries; Coastal lagoons (Priority feature); Large shallow inlets and bays; Reefs; Mudflats and sandflats not covered by seawater at low tide; Salicornia and other annuals colonising mud and sand; Atlantic salt meadows <i>Glaucopuccinellietalia maritima</i>; and</p>

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
			Submerged or partially submerged sea caves; and otter.
Gorllewin Cymru Forol/West Wales Marine cSAC	Candidate SAC therefore no finalised qualifying features or primary reasons for selection; however, the key feature is the presence of harbour porpoise.	32.0 km north-west/ 36.33 km south-west	Included - there is a pathway through potential effects of EMF during operation and noise during construction on the expected qualifying species.  The marine mammal species associated with this designated site has not been identified as being sensitive to contamination from blowout of drilling slurry and therefore this effect is not considered further.
Bae Ceredigion/Cardigan Bay SAC	Annex I habitats - Qualifying feature for SAC selection: Sandbanks which are slightly covered by sea water all the time; Reefs; and Submerged or partially submerged sea caves.  Annex II species - Primary reason for SAC selection: Bottlenose dolphin.  Annex II species - Qualifying feature for SAC selection: sea lamprey ( <i>Petromyzon marinus</i> ); river lamprey ( <i>Lampetra fluviatilis</i> ); and grey seal.	86.4 km south	Included - there is a pathway through potential effects of EMF during operation and noise during construction on the bottlenose dolphin and grey seal only.  Mammals associated with this designated site have not been identified as being sensitive to contamination from blowout of drilling slurry and therefore this effect is not considered further.  The following habitats and species are too distant to be subject to effects from the tunnel activities and are therefore excluded: Sandbanks which are slightly covered by sea water all the time; Reefs; Submerged or partially submerged sea caves; sea lamprey; and river lamprey.

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Malltraeth Marsh/Cors Ddyga SSSI and RSPB Reserve	<p>This site has been selected for its biological interest. It is especially important for its breeding bird community of lowland damp grassland, as a threatened habitat of wet meadows, and for the botanical interest of its ditches and watercourses.</p> <p>Malltraeth Marsh has developed on marine alluvium within the low-lying valley of the Afon Cefni. In 1810 the erection of an embankment to exclude the sea, and measures to reduce flooding through a network of ditches and the canalisation of the River Cefni, enabled its reclamation for agriculture.</p> <p>The botanical interest of the marsh lies in the freshwater and brackish ditches, relict meanders of the old River Cefni, ponds and lakes. Emergent species such as reed canary-grass (<i>Phalaris arundinacea</i>), water-plantain (<i>Alisma plantago-aquatica</i>) and branched bur-reed (<i>Sparganium erectum</i>) are frequent dominants. Amongst the species of importance in Wales reed sweet-grass (<i>Glyceria maxima</i>), horned pondweed (<i>Zanichellia palustris</i>), flowering rush (<i>Butomus umbellatus</i>), water violet (<i>Hottonia palustris</i>), mare's tail (<i>Hippuris vulgaris</i>) and marsh stitchwort (<i>Stellaria palustris</i>). Two nationally scarce species, pillwort (<i>Pilularia globulifera</i>) and autumnal starwort (<i>Callitriche hermaphoditica</i>), occur.</p> <p>The breeding bird community of lowland damp grasslands on the marsh includes mute swan, shelduck, shoveler, lapwing, curlew, redshank, snipe grasshopper warbler, sedge warbler and reed bunting. Other breeding species include buzzard, kestrel, reed warbler and tufted duck. There is a small heronry on the site. Bittern has been heard booming in recent years and marsh harrier, black tailed godwit and ruff, all potential breeders, have been recorded in the spring and early summer. The marsh provides feeding grounds for migrating and wintering waders and wildfowl including the important pintail population in the Cefni estuary.</p> <p>Amongst the eleven species of dragonfly recorded, three are nationally scarce: the hairy dragonfly (<i>Brachytron pratense</i>), the variable damselfly and the scarce blue-tailed damselfly (<i>Ischnura pumilio</i>). Some notable water beetles occur such as <i>Loccobuis sinuatus</i> and <i>Rhantus grapii</i>.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• open water associated with lowland grazing marsh ditch system and former river meanders with associated plants and animals;</li> <li>• presence of pillwort – an aquatic fern;</li> <li>• presence of variable dragonfly and a water beetle (<i>Hydrochus brevis</i>);</li> <li>• presence of wintering shoveler;</li> <li>• assemblage of breeding birds of lowland damp grassland such as lapwing, curlew, redshank and snipe;</li> <li>• an assemblage of breeding birds of open water such as teal, gadwall (<i>Anas strepera</i>), and pochard (<i>Aythya ferina</i>); and</li> <li>• presence of water vole (<i>Arvicola amphibius</i>).</li> </ul> <p>In addition, marshy grassland, lakes, pools and fossiliferous coal and shales on old colliery spoil heaps contribute to the special interest. There is also a small heronry on the site.</p>	<p>2.5 km west</p> <p>Also within the study area for the air quality assessment.</p>	<p>Included – Potential pathway via Afon Cefni through potential for changes in water quality. Also includes effects as a result of air quality as lies within the study area for the air quality assessment.</p> <p>Potential for movements of ducks, swans, waders and heron between the SSSI and habitats on the interior of Anglesey, therefore assessed in relation to the potential for collision risk.</p>
Y Werthyr SSSI	A wetland site which has developed at the head of a short shallow valley running in a northerly direction to the Afon	8.7 km west	Excluded from the ES as no

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
	<p>Caradog. It is a relatively intact example of a mesotrophic valley mire or 'poor fen' and has a high water table. Vegetation communities characteristic of this type of habitat are very well represented and include large stands of rushes e.g. the blunt flowered rush (<i>Juncus subnodulosus</i>), a variety of sedges e.g. the bottle sedge (<i>Carex rostrate</i>) and the slender sedge (<i>Carex lasiocarpa</i>) as well as a range of wetland herbs such as the marsh cinquefoil (<i>Potentilla palustris</i>) and bogbean (<i>Menyanthes trifoliata</i>). There is also a well-developed bryophyte layer in which various mosses, particularly (<i>Acrocladium spp.</i>) are abundant. Among the less common species present, the greater spearwort (<i>Ranunculus lingua</i>) is widely distributed within the site.</p>		<p>pathways for effects have been identified and lies outside of the air quality assessment.</p>
Beddmanarch-Cymyran SSSI	<p>This site, which includes a variety of coastal habitats between Holy Island 'mainland' Anglesey is selected primarily for its ornithological and botanical interest. There are large areas of sandbank, mudflat and saltmarsh, as well as two stands of dune heath. The site also has marine biological interest. A wide range of water birds, both on passage and in winter, are attracted to the area which is especially important for overwintering ringed plover, greenshank, red breasted merganser and goldeneye. A number of coastal bird species also breed in the area, but the former importance of the rocky islands in the Inland Sea for their tern breeding colonies has diminished considerably in recent years.</p> <p>On the mudflats there are beds of eelgrass (<i>Zostera spp.</i>) and all three British species have been recorded. Saltmarsh vegetation fringes most of the site but only forms extensive stands in sheltered bays and estuaries; among the more abundant saltmarsh species present are common saltmarsh grass (<i>Puccinellia maritima</i>), thrift (<i>Armeria maritima</i>), lax flowered sea lavender (<i>Limonium humile</i>), sea rush (<i>Juncus maritimus</i>) and the invasive cord grass (<i>Spartina anglica</i>); the uncommon golden samphire (<i>Inula crithmoides</i>) occurs in both saltmarsh communities and on parts of the rocky shoreline. The coastal dune heath at both Traeth y Gribin and Cymyran are interesting examples of this locally uncommon habitat type.</p> <p>The special features of the SSSI are:</p> <ul style="list-style-type: none"> <li>• marine biological interest including all three British species of eelgrass;</li> <li>• salt marsh vegetation comprising glasswort (<i>Salicornia europaea</i>), common salt-marsh grass, thrift, lax flowered sea lavender and sea rush. The uncommon golden samphire occurs in salt marsh communities and on parts of the rocky shoreline;</li> <li>• coastal dune heath, comprising heather with sand sedge, at Traeth y Gribin and Cymyran; and</li> <li>• overwintering water birds including ringed plover (<i>Charadrius hiaticula</i>), curlew, greenshank, red breasted merganser, goldeneye and brent geese (<i>Branta bernicla</i>).</li> </ul> <p>In addition, mudflats, sandbanks, species-rich muddy gravels, rock outcrops, shingle bars, coastal grassland and scrub contribute to the special interest.</p>	10.5 km west	<p>Excluded from the ES as no pathways for effects, for example from marine works in Section F, have been identified, or resulting from air quality due to the level of road use for the Proposed Development. This site is not included in section 10 of the Ecology and Nature Conservation chapter (<b>Document 5.9</b>) for cumulative effects resulting from air quality, as no effect is reported for the Proposed Development.</p>

Table 9.2 Relevant Statutory and Non-Statutory Designated Sites and Further Information on the Reasons for Designation			
Designated Site Name	Interest Features/Citation	Closest Point to Order Limits	Included or Excluded in ES
Coed Cynol LNR	The reserve woodland is dominated by mature Scots pine, with an under-storey of young oak, beech, sycamore, rowan, birch, hazel, holly and yew. The site hosts a rich assemblage of woodland birds, with resident species including coal tit ( <i>Periparus ater</i> ), long-tailed tit ( <i>Aegithalos caudatus</i> ), tree creeper ( <i>Certhia familiaris</i> ), tawny owl and great spotted woodpecker ( <i>Dendrocopos major</i> ). Some of the summer visitors are blackcap, chiffchaff ( <i>Phylloscopus collybita</i> ), spotted flycatcher ( <i>Muscicapa striata</i> ) and willow warbler ( <i>Phylloscopus trochilus</i> ).	2.7 km east	Excluded from the ES as no pathways for effects have been identified
Rhydau Duon cCWS	Broadleaved woodland, mixed woodland and acid grassland.	2.4 km east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Felin Hen & Cycle Track cCWS	Broadleaved woodland.	2.7 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Cororion Rough cCWS	Broadleaved woodland.	2.8 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Parc Lon Isaf cCWS	Broadleaved woodland.	3.5 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Parc Siambagwynion cCWS	Broadleaved woodland.	3.8 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment
Coed Rhos Uchaf cCWS	Broadleaved woodland.	3.9 km north-east Within 200 m of construction traffic route	Included – as lies within the study area for the air quality assessment