



**Preliminary Ecological Appraisal
for a proposed development
on land at
Briton Ferry Wharf
Briton Ferry,
Neath – Port Talbot**

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Contents

Section	Page number
1. Introduction	3
2. Methodology	5
2.1 Desk Exercise	5
2.2 Extended Phase I Survey	5
2.3 Constraints	5
3. Results	6
3.1 Vegetation and Habitat Survey	6
3.2 Protected Species	9
3.3 Invasive Species	9
4. Discussion	10
4.1 Scheme Details	10
4.2 Recommendations	10
4.3 Promotion of Biodiversity at the Site	11
5. Summary and Conclusions	11
6. References	11
Appendix 1 Plant Species Recorded	12

1. Introduction

Wyndrush Wild was contracted to carry out a preliminary ecological appraisal in support of an application to Neath – Port Talbot Council for a commercial building development on land near Briton Ferry.

The proposed development is on land at Briton Ferry Wharf. The grid reference is centred on SS733936 (see figure 1 below).

The aim of the survey is to provide baseline data on habitat and species, both on and adjacent to the site, and to investigate potential impacts that may occur during construction and post-construction stages. An assessment is made of any potential impact on protected species in the area.



Site at Briton Ferry Wharf – original boundary (red) and revised boundary (orange)

Site Description

The site is a level area of made ground alongside the River Neath, to the south of the M4 viaduct which crosses this. Developed land including lies to the north and east, whilst an area of open ground adjoins the site to the south. Aerial photography suggests that scattered shrub growth across some central parts of the site has recently been cleared. There are no watercourses on the site itself.



Northern part of Proposed Development Site

2. Methodology

2.1 Desk Exercise

A partial desk exercise was initially carried out.

Two protected sites lie within 1km of the site. Earlswood Road Cutting and Ferryboat Inn Quarries SSSI, designated for geological features, lies just over 200m away to the west on the other side of the River Neath. It could not be impacted by the proposal. Crymlyn Burrows SSSI lies just over 800m to the south-west. It is notified for sand dune, saltmarsh and rare invertebrates, and the two sites may share some species in common.

NBN Gateway shows a slow worm record from the 1km square adjoining the site to the north.

The nearby Baglan Energy Park is a brownfield site with a notable flora, including species such as bearded fescue (*Vulpia ciliata*). This species had been found new to south Wales by this author prior to its discovery at Baglan; it was searched for without success at Briton Ferry.

Criteria for selection of Sites of Importance for Nature Conservation indicate that the sea heath (*Frankaenia laevis*) in the creek to the south of the site qualifies this area as a SINCC. Long-headed poppy (*Papaver dubium*), wild mignonette (*Reseda luteola*) and pyramidal orchid (*Anacamptis pyramidalis*), both present on the site, and bee orchid (*Ophrys apifera*) present on adjoining land to the south, are listed as contributory species to SINCC designation.

A data search was subsequently filed with SeWBREC. This returned no records for the application area. Records of intertidal species such as blue mussel and brown shrimp come from the estuary immediately adjoining the site. A record of autumn lady's tresses (*Spiranthes spiralis*) was returned from the area of Open Mosaic Habitat to the south of the site. Other notable plant records from the 500m search radius, including wild liquorice (*Astragalus glycyphyllos*) relate to land on Baglan Energy Park. Other notable records from land to the south-east of the site include small blue (*Cupido minimus*), brown hare (*Lepus europaeus*) and various Birds of Conservation Concern including wintering estuary birds and breeding birds of scrub.

The data search returned details of 14 Sites of Importance for Nature Conservation within a 1km radius. The Open Mosaic Habitat on the land adjoining the site to the south is not amongst these, but Briton Ferry Waste Ground, 141m to the north, is a SINCC selected for Open Mosaic Habitat, Lowland Meadows, brown banded carder bee and small blue. None of these habitats or species are present on the proposed development site. The Neath Estuary SINCC immediately adjoins the site, and is selected for intertidal mudflats, river, coastal and floodplain grazing marsh and saltmarsh. The latter two habitats are not present in this section. Listed species of interest are Peregrine, Whimbrel, Kingfisher, Cetti's warbler, Kestrel, Lapwing, Curlew, Black-headed gull, Herring gull, Skylark, Starling, Linnet, Reed bunting and Otter. The land within the application area is insignificant for these species.

2.2 Extended Phase I Survey

A thorough site inspection was made on 8th June 2022. The survey followed the methodology set out by the Handbook for Phase 1 Habitat Survey (JNCC, 1993) and then subsequently by the Institute of Environmental Assessment (1995).

In addition, the survey looked for field signs of protected species and assessed the habitat for their potential presence. Measures taken included:-

- Consideration of the potential impact of the development on protected species.
- Recording breeding birds and identifying the suitability of the habitat for nesting birds especially those listed as species of conservation concern.
- Recording a list of plants found on the site, shown in Appendix 1.

2.3 Constraints

There were no significant constraints to the survey. Windy weather limited the amount of invertebrate recording.

3. Results

3.1 Vegetation and habitat survey

The habitats at the site were recorded in detail. The area comprises a mosaic of ephemeral/short perennial (J1.3), built ground (J3.6), bare ground (J4) and tall ruderal (C3.1). This mixture of habitats can be collectively described as 'Open Mosaic Habitats on Previously Developed Land', listed as a Section 7 Priority Habitat under the Environment Wales Act (2016). There are also areas of saltmarsh and strandline vegetation to the south of the site.



Phase I habitat map

TN1: Seasonally-inundated ground with lesser centaury

TN2: Pyramidal orchid

TN3: Piles of sand with ruderal flora

Built Ground / Bare Ground / Ephemeral/Short Perennial ('Open Mosaic Habitat')

Areas of ruderal vegetation fringe the site

Although much of the site comprises a relatively intact concrete hardstanding, other areas are ground made using other substrates such as rubble. Together with piles of (presumably) dredged sand, soil and other materials, these areas of bare and sparsely-vegetated ground support a diverse and relatively interesting range of plants typical of infertile soils. Restharrow, mignonette, yellow-wort, kidney vetch, long-headed poppy and pyramidal orchid are amongst these; a full list is given in Appendix 1. A shallow, seasonally-inundated zone towards the south of the site supports a small population of the uncommon least centaury amongst toad rush and other annual plants.

There is little in the way of scrub; aerial photography suggests that areas of this have been cleared recently.

Such mosaics of bare ground and short or open vegetation are sometimes classified as 'Open Mosaic Habitat' (OMH). This is a Section 7 Priority Habitat, often of importance for invertebrates. There is an area of approximately 0.7ha of better-developed OMH contiguous with the site to the south, developed over ground made with colliery spoil. Bee orchid, fairy flax, sand sedge, creeping willow and hedgerow cranesbill are amongst the additional plants present here, and invertebrates noted included six-belted clearwing, a Nationally Scarce moth. Small blue butterfly has been recorded from here. According to Buglife guidance, this suggests a site of 'District (Low) Importance' for invertebrates. The areas of open ground

within the application area will complement the OMH alongside it, but are unlikely to be of more than local ecological significance in their own right.



(top) dredged sand pile in the southern part of the site; (bottom-left) seasonally-inundated area with lesser centaury; (bottom-right) sand pile and rubble areas at the south end of the site, with scattered scrub over colliery spoil in Open Mosaic Habitat outside site beyond it

3.2 Protected species

No badger setts, runs or foraging signs were found on the site. The proposed development will not affect badgers.

No signs of otter or potential holt locations were found on site.

The habitat is unsuitable for amphibian species. There are no water features on the site which would attract amphibians, and no significant potential hibernacula features.

Although brown hare has been recorded from the surrounding area, the land on and adjoining the application area is unsuitable for this species.

The site has little potential for reptiles, having no grassland and no obvious refuge areas. The area adjoining the site to the south has moderate potential for common reptile species such as common lizard and slow-worm. No further survey should be required.

The habitat is of little value to nesting birds. Linnet was the only bird of conservation concern seen, flying over the site. An oystercatcher was present alongside the site to the north, and could potentially have been part of a breeding pair on site.

No bat survey was carried out. There is no potential for roosting bats on site as there are no mature trees or buildings. The site is likely to provide limited habitat for foraging bats.

3.3 Invasive Species



(left) *Buddleia*; (right) *Wall Cotoneaster*

Several non-native species including two invasive species were recorded:

- Wall Cotoneaster (*Cotoneaster horizontalis*). This shrub is listed on Schedule 9 of the Wildlife and Countryside Act and it is illegal to cause it to grow in the wild. It presents

an increasing problem on protected wildlife sites in Wales. A few small bushes were noted on the western fringe of the site, and in the OMH to the south of the site.

- Buddleia (*Buddleija x davidii*). There are several bushes of this Schedule 9 invasive around the southern and western edges of the site.

4. Discussion

4.1 Scheme Details



Much of the site is already under hardstanding

The development proposal is for an industrial building with associated service yard and access. Screening planting of shrubs is proposed to the eastern boundary. No details of intended sewerage were available prior to survey.

4.2 Recommendations

Control or eradication of the two invasive non-native plant species is recommended. Any work such as movement of cut vegetation off site should take account of their presence. Any landscaping, including screening planting, should use native plants.

A Pollution Prevention Plan may be required to ensure that construction and ongoing site use does not impact on the adjoining River Neath SINC and associated inter-tidal habitats.

No other SINCS in the area would be impacted by the proposal.

4.3 Promotion of Biodiversity at the Site

The Local Authority requires that biodiversity enhancements are included in all developments to meet the Authority's Duty of Care under Section 6 of the Environment Act 2016.

Landscaping around the site should aim to retain open ground with a variety of native flowering plants. Where possible, it should retain or create 'untidy' features like sandy banks and seasonally-inundated hollows, at the same time as managing landscape and safety issues. The pile of dredged sand currently on site, for example, could be used to fashion a boundary bank against the southern edge of the site. If left unplanted, this would extend and contribute to the area of valuable habitat on the land to the south.

Ideally, an extensive green roof should be considered on a building in such a location. This would create additional habitat akin to the Open Mosaic Habitat on and alongside the site. With a suitable growing medium and a reliance primarily on natural colonisation it could become a valuable feature for plants, insects and nesting birds.

5. Summary and Conclusions

Although predominantly made ground and hardstanding, the site has areas of ground with a relatively diverse flora. However, in contrast to the area of Open Mosaic Habitat which adjoins the site to the south, these have no potential for reptiles, and no notable invertebrate species were seen. Landscaping associated with the scheme should seek to provide opportunities for species associated with open, disturbed ground, for example by limiting shrub planting to the eastern boundary, and instead working with natural revegetation of infertile substrates such as dredged sand or crushed rubble. Consideration of discharges from the site during and post-construction may require production of a Pollution Prevention Plan or similar.

6. References

Nature Conservancy Council 1990 *Handbook for Phase I habitat survey*

Lush, M.H, Kirby P and Shepherd, P. (2013) *Open Mosaic Habitat Survey Handbook*. ExGsis SDM.

Thomas, S. 2010. *Horizon-scanning for invasive non-native plants in Great Britain*. Natural England Commissioned Reports, Number 053.

Appendix 1 Plant species recorded at the site during the walkover visit

Yarrow	<i>Achillea millefolium</i>
Creeping Bent	<i>Agrostis stolonifera</i>
Alder	<i>Alnus glutinosa</i>
Pyramidal Orchid	<i>Anacamptis pyramidalis</i>
Scarlet Pimpernel	<i>Anagallis arvensis</i>
Compact Brome	<i>Anisantha madritensis</i>
Kidney Vetch	<i>Anthyllis vulneraria</i>
Thale Cress	<i>Arabidopsis thaliana</i>
Thyme-leaved Sandwort	<i>Arenaria serpyllifolia</i>
Mugwort	<i>Artemisia vulgaris</i>
Daisy	<i>Bellis perennis</i>
Yellow-wort	<i>Blackstonia perfoliata</i>
Soft Brome	<i>Bromus hordeaceus</i>
Buddleia	<i>Buddleia x davidii</i>
Glaucous Sedge	<i>Carex flacca</i>
Hairy Sedge	<i>Carex hirta</i>
Lesser Knapweed	<i>Centaurea nigra</i>
Common Centaury	<i>Centaurium erythraea</i>
Lesser Centaury	<i>Centaurium pulchellum</i>
Common Mouse-ear	<i>Cerastium fontanum</i>
Red Valerian	<i>Cetranthus ruber</i>
Creeping Thistle	<i>Cirsium arvense</i>
Spear Thistle	<i>Cirsium vulgare</i>
Common Scurvy-grass	<i>Cochlearia officinalis</i>
Canadian / Mexican Fleabane	<i>Conyza sp.</i>
Wall Cotoneaster	<i>Cotoneaster horizontalis</i>
Beaked Hawksbeard	<i>Crepis capillaris</i>
Montbretia	<i>Crocasmia x crocosmiiflora</i>
Ivy-leaved Toadflax	<i>Cymbalaria muralis</i>
Cock's-foot	<i>Dactylis glomerata</i>
Southern Marsh Orchid	<i>Dactylorhiza praetermissa</i>
Wild Carrot	<i>Daucus carota</i>
Sea Fern-grass	<i>Catapodium marinum</i>
Fern-grass	<i>Catapodium rigidum</i>
Annual Wall Rocket	<i>Diploaxis muralis</i>
Teasel	<i>Dipsacus fullonius</i>
Short-fruited Willowherb	<i>Epilobium cf. obscurum</i>
Great Willowherb	<i>Epilobium hirsutum</i>
Field Horsetail	<i>Equisetum arvense</i>
Common Whitlow-grass	<i>Erophila verna</i>
Hairy Tare	<i>Ervilia hirsuta</i>
Hemp Agrimony	<i>Eupatorium cannabinum</i>
Petty Spurge	<i>Euphorbia peplus</i>
Eyebright	<i>Euphrasia sp.</i>
Red Fescue	<i>Festuca rubra</i>

Wild Strawberry	<i>Fragaria vesca</i>
Common Fumitory	<i>Fumaria officinalis</i>
Goosegrass	<i>Galium aparine</i>
Marsh Bedstraw	<i>Galium palustre</i>
Cut-leaved Cranesbill	<i>Geranium dissectum</i>
Dove's-foot Cranesbill	<i>Geranium molle</i>
Herb Robert	<i>Geranium robertianum</i>
Algerian Ivy	<i>Hedera algeriensis</i>
Hoary Mustard	<i>Hirschfeldia incana</i>
Yorkshire Fog	<i>Holcus lanatus</i>
Cat's-ear	<i>Hypochoeris radicata</i>
Jointed Rush	<i>Juncus articulatus</i>
Toad Rush	<i>Juncus bufonius</i>
Hard Rush	<i>Juncus inflexus</i>
Crested Hair Grass	<i>Koeleria macrantha</i>
Meadow Vetchling	<i>Lathyrus pratensis</i>
Rough Hawkbit	<i>Leontodon hispidus</i>
Lesser Hawkbit	<i>Leontodon saxatilis</i>
Lesser Swine-cress	<i>Lepidium didymum</i>
Ox-eye Daisy	<i>Leucanthemum vulgare</i>
Purple Toadflax	<i>Linaria purpurea</i>
Perennial Rye-grass	<i>Lolium perenne</i>
Common Bird's-foot Trefoil	<i>Lotus corniculatus</i>
Common Mallow	<i>Malva sylvestris</i>
Melilot	<i>Melilotus sp.</i>
Field Forget-me-not	<i>Myosotis arvensis</i>
Changing Forget-me-not	<i>Myosotis ramosissima</i>
Hemlock Water-dropwort	<i>Oenanthe crocata</i>
Common Restharrow	<i>Ononis repens</i>
Long-headed Poppy	<i>Papaver dubium</i>
Common Poppy	<i>Papaver rhoeas</i>
Opium Poppy	<i>Papaver somniferum</i>
Redshank	<i>Persicaria maculosa</i>
Butterbur	<i>Petasites hybridus</i>
Bristly Ox-tongue	<i>Picris echioides</i>
Mouse-ear Hawkweed	<i>Pilosella officinalis</i>
Buckshorn Plantain	<i>Plantago coronopus</i>
Ribwort Plantain	<i>Plantago lanceolata</i>
Greater Plantain	<i>Plantago major</i>
Sea Plantain	<i>Plantago maritima</i>
Annual Meadow-grass	<i>Poa annua</i>
Solomon's Seal	<i>Polygonatum multiflorum</i>
Knotgrass	<i>Polygonum aviculare agg.</i>
Common Polypody	<i>Polypodium vulgare</i>
Creeping Cinquefoil	<i>Potentilla reptans</i>
Self-heal	<i>Prunella vulgaris</i>
Meadow Buttercup	<i>Ranunculus acris</i>
Weld	<i>Reseda lutea</i>

Wild Mignonette	<i>Reseda luteola</i>
Yellow Rattle	<i>Rhinanthus minor</i>
Bramble	<i>Rubus fruticosus</i>
Curled Dock	<i>Rumex crispus</i>
Broad-leaved Dock	<i>Rumex obtusifolius</i>
Annual Pearlwort	<i>Sagina apetala ssp. apetala</i>
Procumbent Pearlwort	<i>Sagina procumbens</i>
Goat Willow	<i>Salix caprea</i>
Grey Willow	<i>Salix cinerea</i>
Common Figwort	<i>Scrophularia nodosa</i>
Biting Stonecrop	<i>Sedum acre</i>
White Stonecrop	<i>Sedum album</i>
Oxford Ragwort	<i>Senecio squalidus</i>
Groundsel	<i>Senecio vulgaris</i>
Field Madder	<i>Sherardia arvensis</i>
Charlock	<i>Sinapis arvensis</i>
Hedge Mustard	<i>Sisymbrium officinale</i>
Prickly Sow-thistle	<i>Sonchus asper</i>
Smooth Sow-thistle	<i>Sonchus oleraceus</i>
Hop Trefoil	<i>Trifolium campestre</i>
Lesser Trefoil	<i>Trifolium dubium</i>
Red Clover	<i>Trifolium pratense</i>
White Clover	<i>Trifolium repens</i>
Scentless Mayweed	<i>Tripleurospermum inodorum</i>
Keeled-fruited Cornsalad	<i>Valerianella carinata</i>
Wall Speedwell	<i>Veronica arvensis</i>
Common Field Speedwell	<i>Veronica persica</i>
Thyme-leaved Sandwort	<i>Veronica serpyllifolia</i>
Common Vetch	<i>Vicia sativa</i>
Squirrel-tail Fescue	<i>Vulpia bromoides</i>
Rat's-tail Fescue	<i>Vulpia myuros</i>