



ENVIRONMENTAL IMPACT ASSESSMENT REPORT - CHAPTER 9

VOLUME 2: MAIN REPORT

For the proposed development at:

Powersknock,

Kilmeaden,

County Waterford.

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9.0 BIODIVERSITY & APPROPRIATE ASSESSMENT

9.1 INTRODUCTION

This chapter of the EIAR has been prepared by Roger Goodwillie B.A., M.Sc., a full member of the Chartered Institute of Ecology and Environmental Management and a practising ecologist for 40 years. He carried out a site visit in October 2021.

Under Article 6(3) of the Habitats Directive a screening for ‘appropriate assessment’ of projects must be carried out to determine if significant effects are likely to arise to Natura 2000 sites. This assessment is carried out by the competent authority, in this case Waterford County Council. The AA Screening report is presented below

The purpose of this report is twofold: to describe the disused quarry as it now is and evaluate its ecological interest and also to examine the proposed development for possible ecological impacts on the integrity of the Natura 2000 network, in particular on the nearby SAC – the Lower River Suir (Site Code 2137).

9.2. DESCRIPTION OF AREA

The quarry is a relatively shallow one, set in slatey, volcanic rocks which create an acid soil when broken down. Mounds of overburden or other fill occur along the northern edge while excavation has generally been towards the southeast. Today the highest face is in the SE corner at 3-4m. In other directions excavation has extended more gradually or been subsequently obscured so that the NE and SW sides slope evenly to the top surface of the surrounding fields or, along the northern edge, a peripheral roadway.



Figure 9.1 Aerial photo of site showing gorse patches (yellow green)

9.3 HABITATS & VEGETATION (see Habitat Map. Figure 9.7)

All the quarry habitats consist of exposed rock and disturbed ground and are colonised to a varying extent by vegetation. They would be classified as exposed siliceous rock (ER1 in Fossitt 2000), spoil and bare ground (ED2) and recolonising bare ground (ED3). Peripheral areas carry gorse scrub (WS1) especially on the southern side where extraction has not been extended to the property boundary.

9.3.1 STABLE AREAS

The most stable areas occur along the southern margin beside the scrub and on an isolated part of the eastern end (see photo on previous page). Here gorse *Ulex europaeus* and young trees of eared willow *Salix aurita*, downy birch *Betula pubescens*, Contorta pine *Pinus contorta* and Sitka spruce *Picea sitchensis* are establishing themselves on formerly (1995) open ground. Spaces between the trees carry a skin of lichens, especially *Cladonia pyxidata*, or mosses *Pogonatum aloides*, *Polytrichum juniperinum* with a scatter of higher plants such as

Wood sage	<i>Teucrium scorodonia</i>
Foxglove	<i>Digitalis purpurea</i>
Catsear	<i>Hypochaeris radicata</i>
Slender St John's wort	<i>Hypericum pulchrum</i>
Sweet vernal grass	<i>Anthoxanthum odoratum</i>
Shield fern	<i>Polystichum setiferum</i>
Birdsfoot trefoil	<i>Lotus corniculatus</i>
Creeping cinquefoil	<i>Potentilla reptans</i>



Figure 9.2 Colonisation by woody plants in SW corner

Locally there are patches of wall pennywort *Umbilicus rupestris*, sheep's sorrel *Rumex acetosella* or heath groundsel *Senecio sylvaticus*. Single bushes of Irish whitebeam *Sorbus hibernica* and the small-leaved *Cotoneaster integrifolius* also occur.

In its lower sections this community changes with an increase in the sand fraction of the soil. It then appears as a grassy stand of sweet vernal grass *Anthoxanthum odoratum*, common bent *Agrostis capillaris* and crested dogtail *Cynosurus cristatus* with some glaucous sedge *Carex flacca*, compact rush *Juncus conglomeratus*, centaury *Centaureum erythraea* and red clover *Trifolium pratense*.

9.3.2 REST OF QUARRY

The more disturbed areas have a weedy community benefitting from soil disturbance and topsoil addition. The most extreme case occurs on the western side where newly deposited soil is covered by

Broad-leaved dock	<i>Rumex obtusifolius</i>
Spear thistle	<i>Cirsium vulgare</i>
Prickly sow-thistle	<i>Sonchus asper</i>
Orache	<i>Atriplex patula</i>
Wild turnip	<i>Brassica rapa</i>
Charlock	<i>Sinapis arvensis</i>
Redshank	<i>Persicaria maculosa</i>
Dyer's rocket	<i>Reseda luteola</i>
Marsh woundwort	<i>Stachys palustris</i>
Fool's parsley	<i>Aethusa cynapium</i>



Figure 9.3 Growth of tall herbs on topsoil, looking NE

Elsewhere there is a mix of some of these species with others requiring a lower nutrient level. Prickly ox-tongue *Helminthotheca echoides* and yellow wort *Blackstonia perfoliata* are a feature of more open places while a single plant of the newly introduced narrow-leaved groundsel *Senecio inaequidens* was also seen. Scarlet pimpernel *Anagallis arvensis*, knotgrass *Polygonum aviculare* and scutch *Elytrigia repens* are abundant everywhere, as are

Ribwort plantain	<i>Plantago lanceolata</i>
Creeping bent	<i>Agrostis stolonifera</i>
Corn poppy	<i>Papaver rhoeas</i>
Scentless mayweed	<i>Tripleurospermum inodorum</i>
Coltsfoot	<i>Tussilago farfara</i>
Nipplewort	<i>Lapsana communis</i>
Early vetch	<i>Vicia sativa</i>
Black medick	<i>Medicago lupulina</i>



Bushes of butterfly bush *Buddleja davidii* and grey willow *Salix cinerea* are distributed through most of the site while rose-bay *Chamerion angustifolium* is spreading at the eastern end. There is also an extensive colony of large bindweed *Calystegia silvatica* covering the most recently excavated section in the south centre (as below).



Figure 9.4 Bindweed covering the main excavation

No water occurs on site except for rainwater ponding along the roadways. This introduces another habitat of mud and shallow water and spike-rush *Eleocharis palustris*, water speedwell *Veronica anagallis-aquatica*, toad rush *Juncus bufonius* and celery-leaved buttercup *Ranunculus sceleratus* respond to this.

A stable area east of the entrance supports winter heliotrope *Petasites fragrans* and Japanese knotweed *Reynoutria (Fallopia) japonica*, a major part of which has been killed, as seen below. A few shoots remain however and there is also the related giant knotweed *Reynoutria sachalinensis* on the outside, close to a former entrance to the site. It again is an invasive alien subject to Regulations (SI 477/2011).



Figure 9.5 Current entrance to site with Japanese knotweed colony to right

9.4 SURROUNDING HABITATS

The quarry is located in agricultural surroundings with fields of grass in all directions. A trackway along the northern side gives access to farm buildings above. The track is overhung by a belt of trees (mapped as Powersknock Wood) which consists of oak, beech, sycamore, wild cherry and Turkey oak, with infill by blackthorn *Prunus spinosa* and holly *Ilex aquifolium*. Wood sage *Teucrium scorodonia*, foxglove *Digitalis purpurea* and germander speedwell *Veronica chamaedrys* are prominent on the bank below.

These trees are subject to a Tree Preservation Order (TPO 15/71) and are rooted outside the site on the edge of a grassland field.

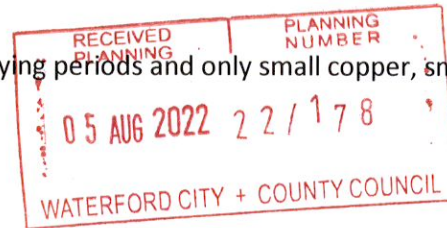
9.5 FAUNA

There was no evidence of resident mammals on site apart from the rabbit (in the SW quarter) though foxes are very likely to visit regularly. Records of badger, fox and pine marten (NBDC data) show that these species have been seen about 1km away to the NE while hares are recorded to the west. Small species are likely to include hedgehog, wood mouse and pygmy shrew.

There is suitable bat feeding habitat on the periphery of the site but no likely roosting places.

The birds seen were linnet, buzzard, jackdaw, dunnock, wren, blackbird, robin. Whitethroat are likely breeders in the summer and stonechat could also occur; both are recorded from the appropriate 10km grid square (Balmer et al. 2013).

The visit in October did not coincide with butterfly-flying periods and only small copper, small tortoiseshell and speckled wood were seen.



9.6 EVALUATION & COMMENT

The habitat of much of the site has little ecological interest; its vegetation is made up of a community of plants and insects which are frequent in disturbed soils and abandoned land and contains several introduced species. However, where bedrock is exposed there is the slow development of a heathy habitat with a good range of acid-loving plants. None of these are rare and they would occur on many of the rocky knobs that are a feature of East Waterford.

All disused quarries develop significant biodiversity as compared to farmland and this site could be thought of as of medium value in this context.

9.7 IMPACT OF DEVELOPMENT

9.7.1 MAIN FEATURES

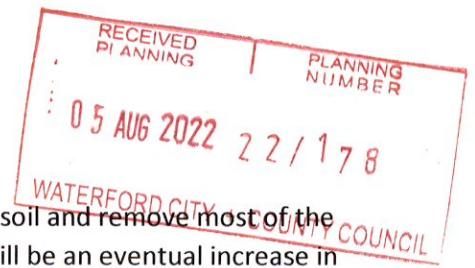
The project is to fill the quarry void with inert material derived as a by-product from building or other work in the vicinity. The material will be produced as an integral part of other development work and will not require processing on this site.

A wheel-wash will be installed for trucks leaving the site and fuel will be stored in bunded containers.

Biosecurity measures will be employed during the operation to avoid the spread of existing non-native invasive species plants or the introduction of any new ones. The donor sites should supply a statement that all material is 'invasives-free'.

Any hired equipment and machinery used on site will be treated with an approved biocide / cleaning agent prior to its arrival on site. The NRA guidelines '*The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*' (2010) will be followed for the project.

The main part of the site will be converted to agricultural land after filling. New tree planting will be located on the northern and western side slopes and will be based on native species, especially alder, oak, wild cherry, Scot's pine and hawthorn.



9.7.2 EFFECTS OF DEVELOPMENT

The direct impact of the project will be to cover the existing quarry with soil and remove most of the habitats, leaving part of the existing scrub on the southern side. There will be an eventual increase in trees when new planting on the side slopes starts to make an impact.

The loss of habitat will primarily be of the disturbed ground which dominates the site today. Some patches of this community are likely to develop during the filling process before agricultural remediation takes place. Retaining the gorse and willows around the margins will mean that there is a seed source for the internal area.

Other direct impacts relate to the reduction of the wildlife which is dependant on the plant cover for food (insects and other invertebrates) with the bird species that prey on them. Disturbance effects are unlikely as only small passerines are involved rather than birds of prey.

The effects of the development on ecology will be limited to the site itself and there will be no indirect impacts from additional traffic or noise. Trees on the eastern and northern sides of the access road will not be affected as the road surface will be retained in its present form. The in-combination effects of taking material from the donor sites and filling the quarry will not be significant as the habitats will be different in most, if not asll, cases.

9.7.3 MITIGATION

New tree planting will be located on the northern and western side slopes of the fill and will be based on native species, especially alder, oak, wild cherry, Scot's pine and hawthorn.

The control of Japanese knotweed and giant knotweed has been effective in the last two years but the situation will be kept under review and any regrowth treated with herbicide to eliminate the threat to biodiversity. The ground surface surrounding the former colonies will be marked and will not be interfered with for at least five years after complete control.

9.7.4 ACTUAL CHANGES

A temporary colonisation of a filled surface such as this will take place naturally from the weed seeds that will be introduced with the incoming material. After completion the site will be managed as agricultural grassland.

New planting will create a mixed scrub on the northern and western sides that will be attractive to small birds such as willow warbler, whitethroat, robin, dunnock and wren. As the trees grow larger they will provide feeding habitat for bats.

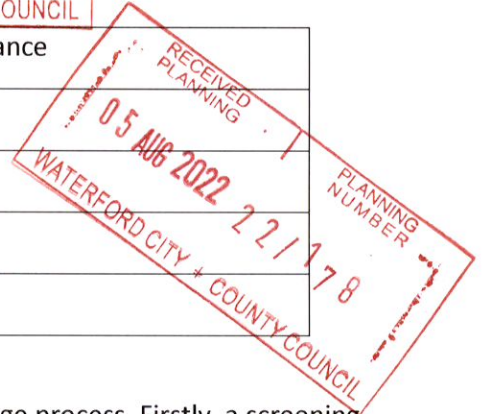
9.8 APPROPRIATE ASSESSMENT

9.8.1 INTRODUCTION

Appropriate assessment was introduced by the EU Habitats Directive as a way of determining if a planned project is likely to have a significant effect on the integrity of one of the Natura 2000 sites so far designated (i.e. the candidate SAC's and SPA's), or their conservation objectives. In this case there are four Natura sites within 15km of the site which are shown on the map at end. They are:

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Name of site	Site Code	Distance
Lower River Suir	2137	2.1
Tramore dunes and backstrand SAC	0671	7.0
Tramore Backstrand SPA	4027	7.0
Mid-Waterford coast SPA	4193	7.9

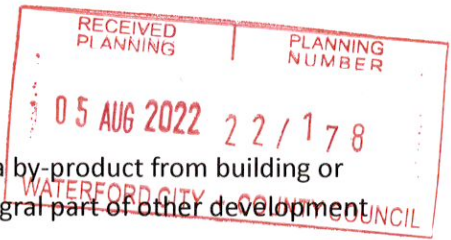


In the Irish context the assessment has been interpreted as a four-stage process. Firstly, a screening exercise (Stage 1) determines if a project could have significant effects on a Natura site. If it does or the situation is unclear a Natura Impact Statement (Stage 2) which may include mitigation measures is provided to the regulatory authority. Examples of significant effects are a loss of habitat area, fragmentation of the habitat, disturbance to species using the site and changes in water resources or quality. If such negative effects come to light in the assessment, alternative solutions are investigated by the proponent (Stage 3) and modifications made unless the project is deemed to be driven by 'imperative reasons of overriding public interest' in its current form. In this case Stage 4 then deals with compensatory action.

The following guidance documents have been used in the screening process:

- Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (DEHLG 2009, Revised February 2010).
- EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC (EC, 2007).
- Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC (EC, 2002).
- Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 9. (EC 2000).
- Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities. Circular NPW 1/10 and PSSP 2/10.
- Guidelines for Good Practice Appropriate Assessment of Plans under Article 6(3) Habitats Directive (International Workshop on Assessment of Plans under the Habitats Directive, 2011).
- Guidance document on the strict protection of animal species of Community interest under the Habitats Directive 92/43/EEC.
- The Status of EU Protected Habitats and Species in Ireland 2013 (Department of Arts, Heritage and the Gaeltacht, 2013). 2/43/EEC (EC, 2000.)
- Court of Justice EU Case C-323/17. Directive 92/43/EEC Article 6(3) — Screening in order to determine whether or not it is necessary to carry out an assessment of the implications, for a special area of conservation, of a plan or project — Measures that may be taken into account for that purpose.

- Appropriate Assessment Screening for Development Management OPR Practice Note PN01. March 2021



9.8.2 PROJECT DESCRIPTION

The project is to fill the quarry void with inert material derived as a by-product from building or other work in the vicinity. The material will be produced as an integral part of other development work and will not require processing on this site.

A wheel-wash will be installed for trucks leaving the site and fuel will be stored in bunded containers.

Biosecurity measures will be employed during the operation to avoid the spread of existing non-native invasive species plants or the introduction of any new ones. The donor sites should supply a statement that all material is 'invasives-free'.

Any hired equipment and machinery used on site should be treated with an approved biocide / cleaning agent prior to its arrival on site. The NRA guidelines '*The Management of Noxious Weeds and Non-Native Invasive Plant Species on National Roads*' (2010) will be followed for the project.

9.8.3 SCREENING OF NATURA SITES

The site is in the catchment of the Lower River Suir though it has no watercourse or direct link to the river. A possible pathway exists for sediment dropped on local roads to get to the SAC but once in the quarry surroundings, this is most unlikely. As mentioned, there is no significant water ponding or overflow and all drainage percolates into the substrate.

Both of the Tramore Natura 2000 sites and the Mid-Waterford coast have their own catchments separate from Kilmeaden and there is no possibility of impacts on them from the site in question.

Lower River Suir SAC

This site contains excellent examples of a number of Annex I habitats, including the priority habitats alluvial forest and Yew woodland. The site also supports populations of several important animal species, some listed on Annex II of the Habitats Directive or listed in the Irish Red Data Book. The presence of two legally protected plants (Flora (Protection) Order, 1999) and the ornithological importance of the site adds further to the ecological interest and importance.

The most important or qualifying features are items listed in the Annexes, i.e.

[1330] Atlantic Salt Meadows

[1410] Mediterranean Salt Meadows

[3260] Floating River Vegetation

[6430] Hydrophilous Tall Herb Communities

[91A0] Old Oak Woodlands

[91E0] Alluvial Forests*

[91J0] Yew Woodlands*

[1029] Freshwater Pearl Mussel (*Margaritifera margaritifera*)

[1092] White-clawed Crayfish (*Austropotamobius pallipes*)

[1095] Sea Lamprey (*Petromyzon marinus*)

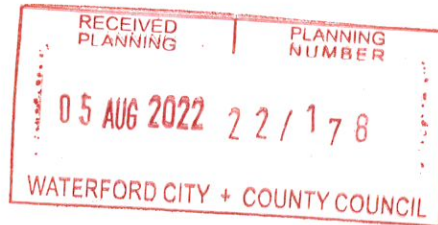
[1096] Brook Lamprey (*Lampetra planeri*)

[1099] River Lamprey (*Lampetra fluviatilis*)

[1103] Twaite Shad (*Alosa fallax*)

[1106] Atlantic Salmon (*Salmo salar*)

[1355] Otter (*Lutra lutra*)



The interests that are relevant to this site are solely aquatic animals – the white-clawed crayfish, river and brook lampreys, Atlantic salmon and otter. There is some development of [1330] Atlantic Salt Meadows and [1410] Mediterranean Salt Meadows downstream around Little Island but at too great a distance to be affected by any potential outflows.

None of the other features occurs on or within range of impacts from the site and they are not potentially at risk from the project.

9.8.4 CONSERVATION OBJECTIVES

SAC

Each of the above interests has conservation objectives listed in NPWS (2011). Broadly these may be expressed as follows:

1. To maintain the Annex I habitats for which the cSAC has been selected at favourable conservation condition,
2. To maintain or restore the Annex II species for which the SAC has been selected at favourable conservation condition.

The favourable conservation condition of a habitat is achieved when:

- its natural range, and area it covers within that range, are stable or increasing
- the specific structure and functions which are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future
- the conservation status of its typical species is favourable.

The favourable conservation condition of a species is achieved when:

- population dynamics data on the species concerned indicate that it is maintaining itself on a long-term basis as a viable component of its natural habitats
- the natural range of the species is neither being reduced nor is likely to be reduced for the foreseeable future
- there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term basis.

9.8.5 POTENTIAL EFFECTS

The development site is 1.8km from the nearest part of the designation but there is no drain or ditch linking the two.

The only way inert material could reach the river is through road drainage on the R680 if this is discharged to one of the local streams.

9.9. CONCLUSION OF SCREENING

Screening suggests that the possibility of road deposits of sufficient size or regularity to influence the ecology of the River Suir is so remote as to be insignificant.

For this reason it is concluded that there is no likelihood that the proposed project will give rise to significant negative effects on the integrity of the Lower River Suir SAC or any of the Natura 2000 network. The development will not compromise the attainment of the conservation objectives of these sites.

This holds for the project by itself or in combination with other projects in the vicinity.

9.10 DIFFICULTIES ENCOUNTERED IN COMPILING

No difficulties were encountered in compiling this study.

9.11 REFERENCES

DEHLG. 2009. Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities (Revised February 2010).

European Commission. 2000. Managing Natura 2000 Sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg.

European Commission. 2002. Assessment of plans and projects significantly affecting Natura 2000 sites. Methodological guidance on the provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Luxembourg.

European Commission. 2007. EU Guidance document on Article 6(4) of the 'Habitats Directive' 92/43/EEC. Clarification of the concepts of: alternative solutions, imperative reasons of overriding public interest, compensatory measures, overall coherence, opinion of the Commission. IEEM. 2006.

Fossitt, J.A. 2000 *A guide to habitats in Ireland*. Heritage Council

Guidelines for Ecological Impact Assessment in the United Kingdom. Institute of Ecology and Environmental Management.

NPWS (2017) Conservation Objectives: Lower River Suir SAC 002137. Version 1. National Parks and Wildlife Service, Department of Arts, Heritage, Regional, Rural and Gaeltacht Affairs



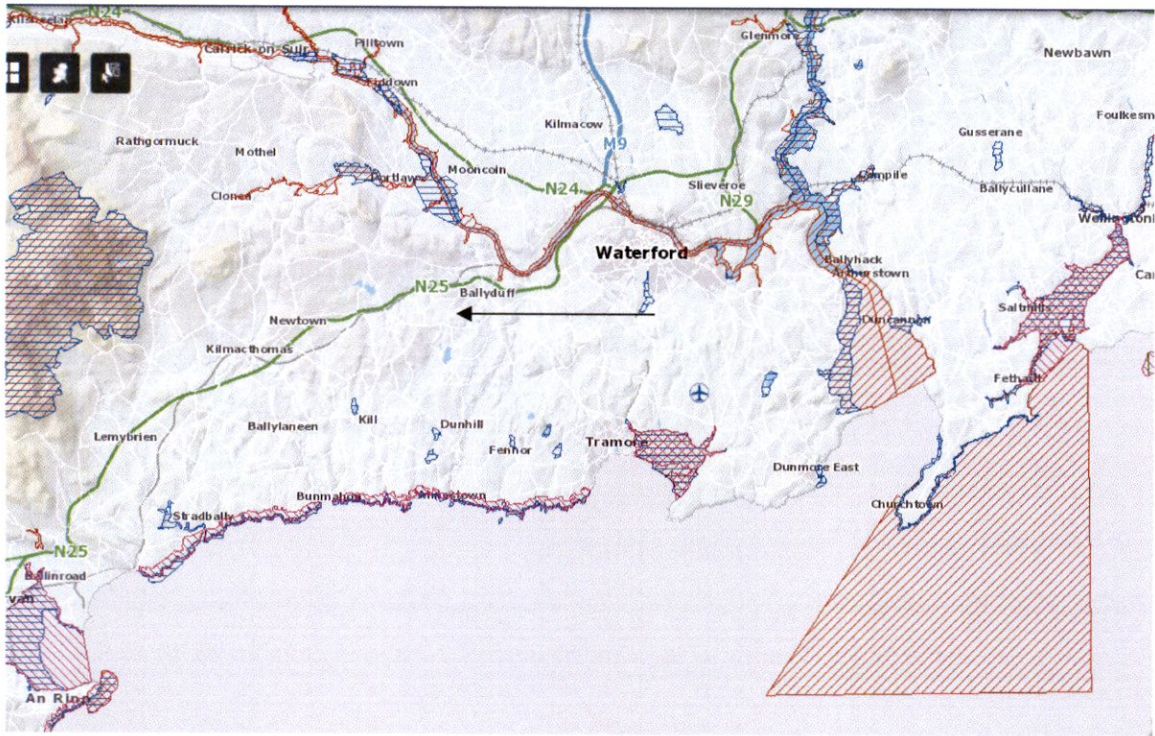


Figure 9.6 Location of site in relation to Natura 2000 sites within 15km (red hatching)

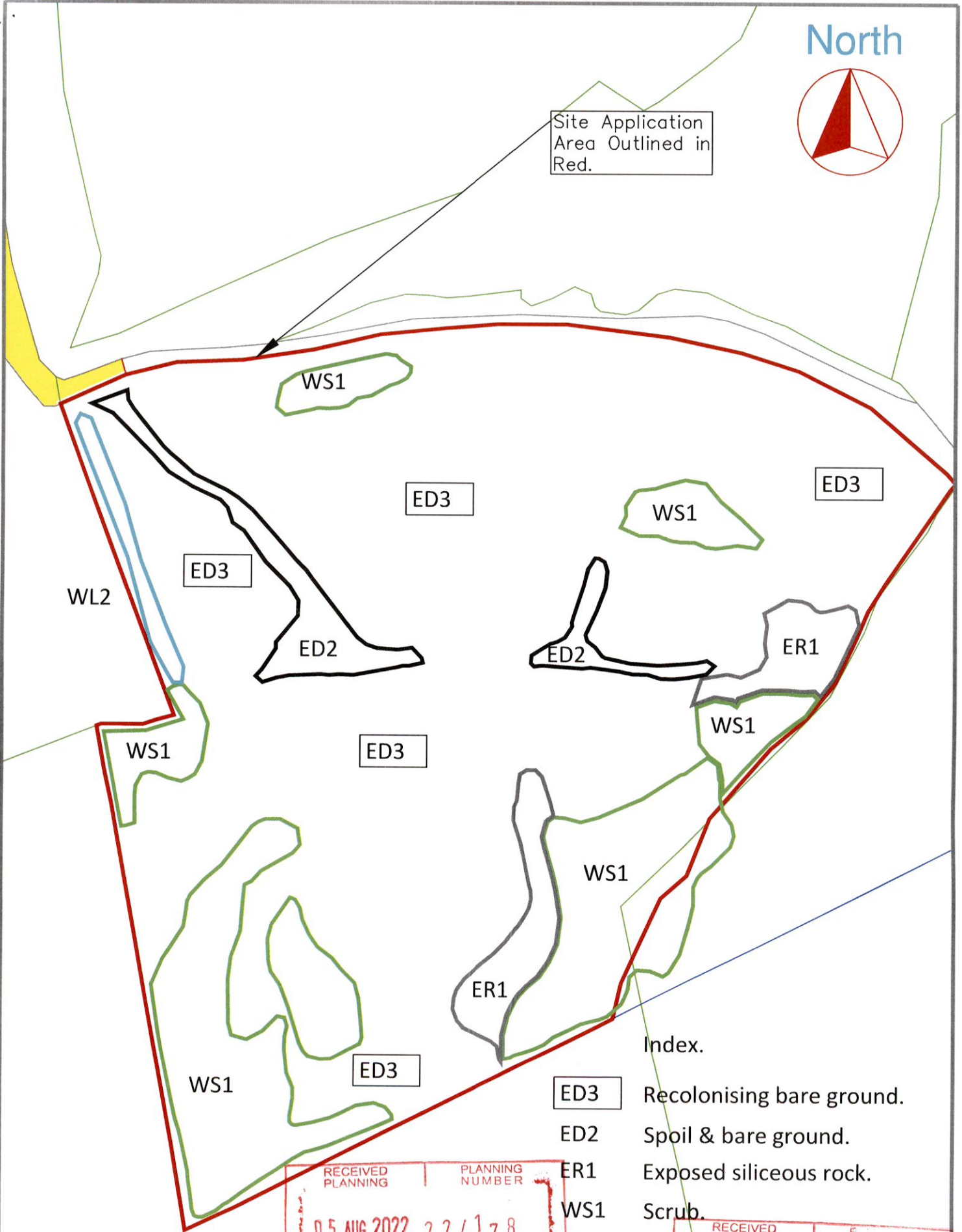
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North



Site Application Area Outlined in Red.



Index.

- ED3 Recolonising bare ground.
- ED2 Spoil & bare ground.
- ER1 Exposed siliceous rock.
- WS1 Scrub.
- WL2 Treeline.

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RECEIVED PLANNING | PLANNING NUMBER
 05 AUG 2022 22/178
 WATERFORD CITY + COUNTY COUNCIL

CLIENT: **TBB Ltd.**

TITLE: Proposed restoration of lands comprising some 3.26 hectares at Powersknock, Kilmeaden, to agricultural use using imported inert soil and stone classified as Art. 27 byproducts of the construction industry.

Figure 9.7 Habitat Map