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Ms. Niamh Thornton
An Bord Pleanála,
64 Marlborough Street,
Dublin 1,
D01 V901

Date: 9th April 2020

Re: Whether the construction of an Agricultural she to the lands located at Derrinacahara, Dunmanway, Co. Cork which are owned by Declan White (Folio CK177036F) and all associated site works is or is not development and is or is not exempted development.

An Bord Pleanála Case Number: ABP-305550-19
Planning Authority Reference Number: D/21/19
OCFPM Reference: HW 2006 – Declan White

Dear Ms. Thornton,

I refer to your request for further information on the 17th February 2020 (see attached) for the purpose of enabling the Board to determine the appeal, the following was requested to be submitted:

> *It is noted that the development that is subject of the referral is located within 5m of the Bandon River and approximately 4.7km upstream of the designated Bandon River Special Area of Conservation (Site code: 002171), and that works have taken place to create a level area and are proposed to take place to construct the agricultural shed which have the potential to have significant effects on the conservation objectives of this European Site.*
>
> *In order that the Board can consider this matter and to assist in its determination as to whether or not the restrictions on exemption set down in Article 9(1)(a)(viiB) of the Planning and Development Regulations, 2001, as amended, apply to this development, you are requested to provided an Appropriate Assessment Screening Report, prepared by an appropriately qualified ecologist, dealing with the potential for any significant effects, from the development that has taken place and also from the proposed development, by itself and in combination with any other development(s), on this European site. In this regard, please note the implication of the judgement of the European Court of Justice in the case of "People over Wind" (C-323/17-CJEU) which ruled that mitigation measures could not be taken into account at the screening stage of and appropriate assessment.*

As requested above, please see attached the Appropriate Assessment Screening Report prepared by DixonBrosnan Environmental Consultants dated the 9th April 2020.

If you should have any further queries in relation to this appeal, please do not hesitate to contact me or the main OCFPM office.

Yours sincerely,

Donal Fitzgerald
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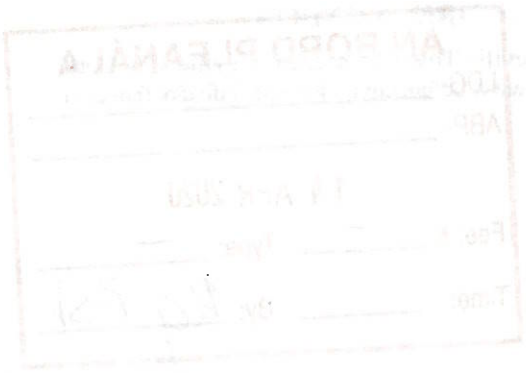

DixonBrosnan

environmental consultants

Project	**Appropriate Assessment Screening Report for a proposed agricultural shed adjoining the Bandon River at Derrynacaheragh, Dunmanway, Co. Cork**
Client	OCFPM Ltd/Declan White

Project ref	**Report no**	**Client ref**	
2033	2033	-	

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Date	**Rev**	**Status**	**Prepared by**	
09/04/20	0	Issue to client	Carl Dixon MSc.	

v180907

1. Introduction

DixonBrosnan were commissioned to prepare a Screening for Appropriate Assessment (AA) for a proposed development at Derrynacaheragh, Dunmanway, Co. Cork

This report comprises information in support of screening for AA to be undertaken by the competent authority in line with the requirements of Article 6(3) of the EU Habitats Directive (Directive 92/43/EEC) on the Conservation of Natural Habitats and of Wild Fauna and Flora; the Planning and Development Act 2000-2019, and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. No. 477/2011) as amended.

The report comprises an examination of whether, in view of best scientific knowledge and applying the precautionary principle, the proposed development, either individually or in combination with other plans or projects, is likely to have a significant effect on any European site(s). The assessment will be carried out in accordance with the legal context outlined below.

This AA screening was requested by An Bord Pleanala as outlined in their letter of February 17 2020. The request was phrased as follows;

It is noted that the development that is the subject of the referral is located within 5m of the Bandon River and approximately 4.7km upstream of the designated Bandon River Special Area of Conservation (Site code: 002171), and that works have taken place to create a level area and are proposed to take place to construct the agricultural shed which have the potential to have significant effects on the conservation objectives of this European Site.

In order that the Board can consider this matter and to assist in its determination as to whether or not the restrictions on exemption set down in Article 9(1)(a)(viiB) of the Planning and Development Regulations, 2001, as amended, apply to this development, you are requested to provide an Appropriate Assessment Screening Report, prepared by an appropriately qualified ecologist, dealing with the potential for any significant effects, from the development that has taken place and also from the proposed development, by itself and in combination with any other development(s), on this European site. In this regard, please note the implication of the judgement of the European Court of Justice in the case of "People over Wind" (C-323/17- CJEU) which ruled that mitigation measures could not be taken into account at the screening stage of an appropriate assessment.

1.2 Background and Legislative Context for Appropriate Assessment

The Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Fauna and Flora, better known as "The Habitats Directive", provides legal protection for habitats and species of European importance. Articles 3 to 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of a European Union (EU)-wide network of sites known as Natura 2000 (hereafter referred to as 'European sites'). In the Republic of Ireland, European sites comprise:

Special Areas of Conservation (SACs) designated for habitats, plants, and non-bird species, under the Habitats Directive (92/43/EEC);

Special Protection Areas (SPAs) designated for bird species and their habitats, under the Birds Directive (79/409/ECC as codified by Directive 2009/147/EC); and

'Candidate' sites including 'cSACs'. The process of designating cSACs as SACs is ongoing in Ireland. The term SAC is used throughout this report for both SACs and cSACs, given they are subject to equal protection.

The Habitats Directive has been transposed into Irish law by Part XAB of the Planning and Development Act, 2000 - 2019 and the European Communities (Birds and Natural Habitats) Regulations 2011 (S.I. 477/2011) as amended. In the context of the proposed development, the governing legislation is the Birds and Habitats Regulations.

1.2.1 European Context

Articles 6(3) and 6(4) of the Habitats Directive set out the decision-making tests for plans and projects likely to have a significant effect on or to adversely affect the integrity of European sites (Annex 1.1). Article 6(3) establishes the requirement for Appropriate Assessment (AA):

"Any plan or project not directly connected with or necessary to the management of the [European] site but likely to have a significant effect thereon, either individually or in combination with other plans or projects, shall be subjected to appropriate assessment of its implications for the site in view of the site's conservation objectives. In light of the conclusions of the assessment of the implications for the site and subject to the provisions of paragraph 4, the competent national authorities shall agree to the plan or project only after having ascertained that it will not adversely affect the integrity of the site concerned and, if appropriate, after having obtained the opinion of the general public."

Article 6(4) states:

"If, in spite of a negative assessment of the implications for the [European] site and in the absence of alternative solutions, a plan or project must nevertheless be carried out for imperative reasons of overriding public interest, including those of a social or economic nature, Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted."

1.2.2 National Context

In the context of the proposed development, the requirement (to screen) for AA under the Habitats Directive is transposed by the Planning and Development Acts (2010 to 2018 as amended); 'the Planning Acts', and the Planning and Development Regulations (2010 to 2018, as amended). Under Section 177U (5) of the Planning and Development Acts 2000-2010, as amended ('the Planning Acts'), the competent authority shall determine that an AA of a proposed development is required if it cannot be excluded , on the basis of objective information, that the proposed development, individually or in combination with other plans or projects, will have a significant effect on a European site(s).

1.2.3 Role of the Competent Authority

The competent authority is obliged to consider, in view of best scientific knowledge, whether the proposed works are likely to have a significant effect either individually or in combination with other plans and projects. If screening determines that there is likely to be significant effects

on a European site, then AA must be carried out for the works including the compilation of a Natura Impact Statement (NIS) to inform the decision making.

1.3 Stages of Appropriate Assessment

The Department of the Environment, Heritage and Local Government guidelines (DELHG, 2009, rev. 2010) outlines the European Commission's methodological guidance (EC, 2002) promoting a four-stage process to complete the AA and outlines the issues and tests at each stage. An important aspect of the process is that the outcome at each successive stage determines whether a further stage in the process is required.

The four stages are summarised diagrammatically in **Figure 1**. Stages 1-2 deal with the main requirements for assessment under Article 6(3), and Regulation 42 of the Birds and Habitats Regulations. Stage 3 may be part of the Article 6(3) Assessment or may be a necessary precursor to Stage 4. Stage 4 is the main derogation step of Article 6(4).

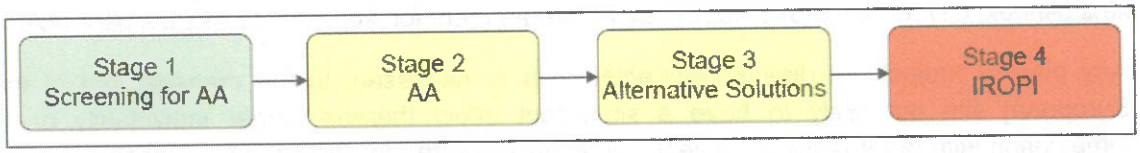

Figure 1 Four Stages of Appropriate Assessment

Stage 1 - Screening is the process that addresses and records the reasoning and conclusions in relation to the first two tests of Article 6(3):

I. whether a plan or project (in this instance the proposed works) is directly connected to or necessary for the management of the European sites, and

II. whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on the European sites in view of their conservation objectives.

If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2 (AA). This report fulfils the information necessary to enable the competent authority to screen the proposal for the requirement to prepare an AA.

This report forms Stage 1 of the AA process and sets out the following information:

- Description of the proposed works;
- Characteristics of the proximal European sites; and
- Assessment of significance of the proposed works on the European sites in question.

1.4 Author of Report for Screening and Appropriate Assessment

This report was prepared by Carl Dixon MSc (Ecology), a senior ecologist who has over 20 years' experience in ecological and water quality assessments with particular expertise in freshwater ecology. He also has experience in mammal surveys, invasive species surveys and ecological supervision of large-scale projects. Projects in recent years include the Waste to Energy Facility Ringaskiddy, Shannon LNG Project, supervision of the Fermoy Flood Relief

Scheme, Skibbereen Flood Relief Scheme, Upgrade of Mallow WWTP Scheme, Douglas Flood Relief Scheme, Great Island Gas Pipeline etc.

2. Site location

The site is located on banks of the Bandon River at Derrynacaheragh, Dunmanway, Co. Cork. The location of the site is shown below in **Figure 2.**

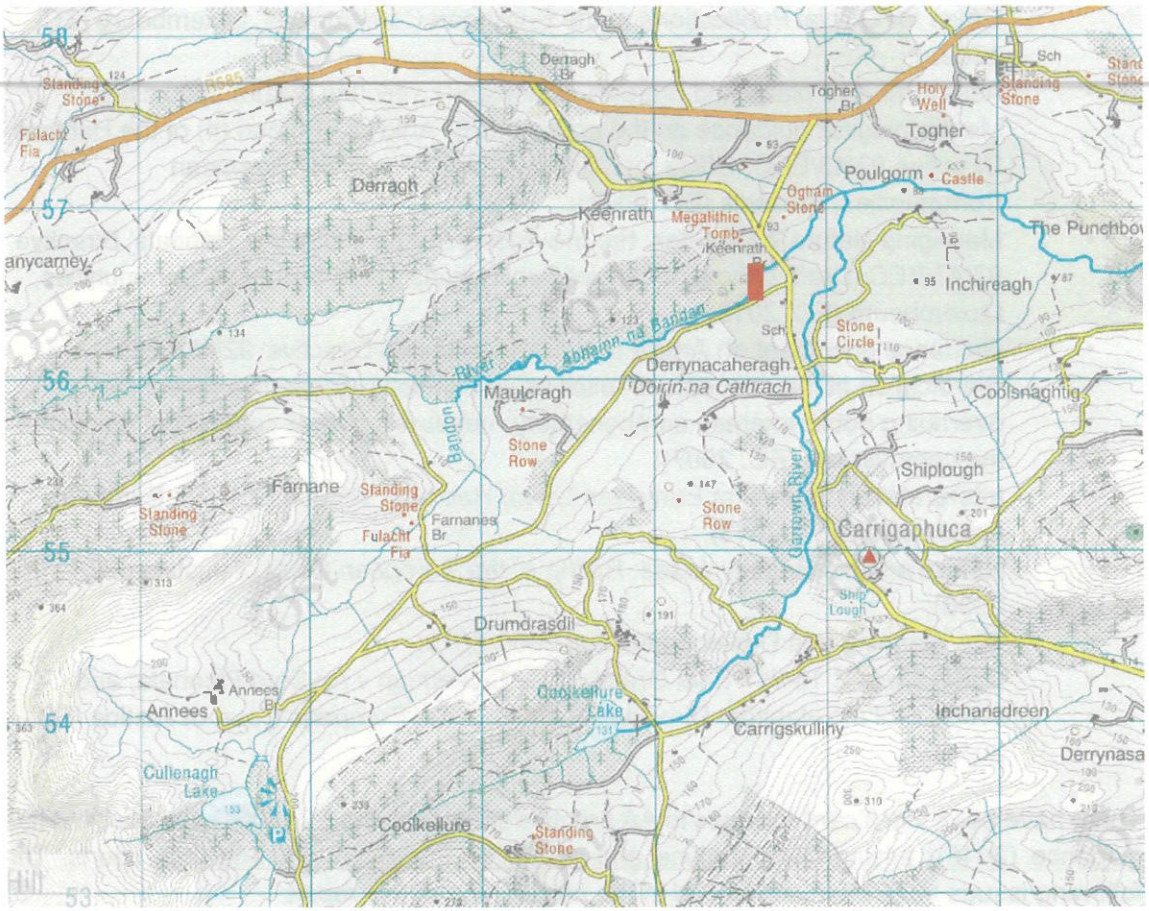

Figure 2 Location of proposed development

3. Nature of development

The proposal comprises the construction of an agricultural shed on a hardstanding area in proximity to the Bandon River. The proposed shed will be located 12m from the river. The shed will be used for the storage of farm machinery and equipment, fencing materials and hay and/or straw. The shed will not be used for the storage of hydrocarbons, silage or animal waste. Drawings are included in **Appendix 2.**

4. Methodology

4.1 Appropriate assessment guidance

EU and national guidance exist in relation to Member States' fulfilling their requirements under the EU Habitats Directive, with particular reference to Article 6(3) and 6(4) of that Directive. The methodology followed in relation to this AA has had regard to the following guidance:

- Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities. Department of Environment, Heritage and Local Government (DoEHLG, 2010);
- Department of Environment Heritage and Local Government Circular NPWS 1/10 and PSSP 2/10 on Appropriate Assessment under Article 6 of the Habitats Directive – Guidance for Planning Authorities (DEHLG, 2010b);
- Communication from the Commission on the Precautionary Principle (EC, 2000), Office for Official Publications of the European Communities, Luxembourg (EC, 2000a);
- Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC. Office for Official Publications of the European Communities, Brussels (EC, 2001);
- Managing Natura 2000 Sites: the provisions of Article 6 of the 'Habitats' Directive 92/43/EEC (Draft) Office for Official Publications of the European Communities, Luxembourg (EC, 2018);
- 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; (EC, 2007);
- Interpretation Manual of European Union Habitats. Version EUR 28. European Commission (EC, 2013);
- Nature and biodiversity cases: Ruling of the European Court of Justice (EC, 2006);
- The Planning and Development Act 2000-2019;
- CJEU Case C 164/17 Edel Grace Peter Sweetman v An Bord Pleanála; and
- Article 6 of the Habitats Directive: Rulings of the European Court of Justice (EC, 2014).

There have been significant changes to AA practice since both the EC (2001) and the DoEHLG guidance (2010), arising from practice and rulings in European, UK and Irish courts. The following issues have been addressed in the preparation of this report:

When considering whether a European site can be screened out, the competent authority cannot take into account any measures intended to avoid or reduce the harmful effects of the proposed development (i.e. mitigation measures)[1]; however, a 2019 Irish High Court consideration[2] concluded that Sustainable Drainage Systems (SuDS) are "as a matter of fact and law… not mitigation measures which a competent authority is precluded from considering at the stage 1 screening stage";

The screening must consider the cumulative impacts of any development: that already exists; for which a planning application has been made; which the applicant for permission intends to make an application in the future; and, which is a matter of public record and which is planned to be implemented in the future; Consideration of the cumulative effects of plans, including local area plans;

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[1] *People Over Wind v Coillte Teoranta* (Court of Justice of the EU, case C-323/17)

[2] *Kelly v An Bord Pleanála & anor* [2019] IEHC 84 (High Court)

Where an element of the proposed development is missing design detail or subsequent agreements, the assessment should assume the worst-case scenario (i.e. the design with the greatest environmental impact); and Making of findings explicit.

5. Screening of Proposed Development

In accordance with the Department of Environment Heritage and Local Government (DoEHLG) Guidelines screening is the process that addresses two tests of Article 6(3) of the Habitats Directive;

I. *whether a plan or project is directly connected to or necessary for the management of the site, and*
II. *whether a plan or project, alone or in combination with other plans and projects, is likely to have significant effects on a Natura 2000 site in view of its conservation objectives.*
III. *If the effects are deemed to be significant, potentially significant, or uncertain, or if the screening process becomes overly complicated, then the process must proceed to Stage 2.*

5.1. Desktop Study

A desktop review facilitates the identification of the baseline ecological conditions and key ecological issues relating to Natura 2000 sites and facilitates an evaluation assessment of potential in-combination impacts. Sources of information used for this screening report include reports prepared for the area, information from statutory and non-statutory bodies. The sources of information and relevant documentation utilised are as follows:

- National Parks & Wildlife Service (NPWS) - www.npws.ie including qualifying interests and conservation objectives for Natura 2000 sites.
- Information on the status of EU protected habitats in Ireland (National Parks & Wildlife Service, 2013a & 2013b)
- Environmental Protection Agency (EPA) – www.epa.ie;
- BirdWatch Ireland - http://www.birdwatchireland.ie/;
- National Biodiversity Data Centre – www.biodiversityireland.ie;
- Water Framework Directive website – www.catchments.ie; and
- Ordnance Survey of Ireland – Mapping and Aerial photography www.osi.ie.

5. 2 Field Study

Site surveys were carried out on the 17th of December 2019 and 4th March 2020 to identify the habitats, flora and fauna present at the site. The surveys assessed the potential for all Qualifying Interests (QIs)/ Special Conservation Interests (SCIs) of European sites and third schedule [3] invasive species to occur within the proposed site.

[3] Invasive species scheduled to the EC (Birds and Natural Habitats) Regulations 2011-2015 ('the Regulations'). Under the Regulations, it is an offence to plant, disperse, allow or cause to disperse, spread or otherwise cause to grow in any place any species scheduled to the Regulations without a licence.

5.3 Relevant European Sites and Zone of Influence

Natura 2000 sites (European sites) are only at risk from significant effects where a source-pathway-receptor link exists between a proposed development and a Natura 2000 site(s). This can take the form of a direct impact (e.g. where the proposed development and/or associated construction works are located within the boundary of the Natura 2000 site(s) or an indirect impact where impacts outside of the Natura 2000 site(s) affect ecological receptors within (e.g. impacts to water quality which can affect habitats at a distance from the impact source).

5.3.1 Zone of influence

The proximity of the proposed development to European sites, and more importantly QIs/SCIs of the European sites, is of importance when identifying potential likely significant effects. During the initial scoping of this report, a 15 km ZoI was applied for impact assessment. A conservative approach has been used, which minimises the risk of overlooking distant or obscure effect pathways, while also avoiding reliance on buffer zones (e.g. 15 km), within which all European sites should be considered.

"For projects, the distance could be much less than 15 km, and in some cases less than 100m, but this must be evaluated on a case-by-case basis with reference to the nature, size and location of the project, and the sensitivities of the ecological receptors, and the potential for in combination effects" (DoEHLG, 2010; p.32, para 1).

Following the guidance set out by the NRA (2009), the proposed development has been evaluated based on an identified ZoI with regard to the potential impact pathways to ecological features (e.g. mobile and static). The ZoI of the proposed development on mobile species (e.g. birds, mammals, and fish), and static species and habitats (e.g. saltmarshes, woodlands, and flora) is considered differently. Mobile species have 'range' outside of the European site in which they are QI/SCI. The range of mobile QI/SCI species varies considerably, from several metres (e.g. in the case of invertebrate species), to hundreds of kilometres (in the case of migratory wetland birds). Whilst static species and habitats are generally considered to have ZoIs within close proximity of the proposed development, they can be significantly affected at considerable distances from an effect source; for example, where an aquatic QI habitat or plant is located many kilometres downstream from a pollution source. Hydrological linkages between the proposed development and European site (and their QIs/SCIs) can occur over significant distances; however, any effect will be site specific depending on the receiving water environment and nature of the potential impact. As a precautionary measure, a reasonable worst-case ZoI for water pollution from the proposed development site is considered to be the surface water catchment. In this report, the surface water catchment is defined at the scale of Catchment Management Unit (CMU), as adopted in the *River Basin Management Plan (RBMP) for Ireland 2018-2021* (DoHPLG, 2018).

5.4 Source-Pathway-Receptor Model

The likely effects of the proposed development on any European site has been assessed using a source-pathway-receptor model, where:

- A 'source' is defined as the individual element of the proposed works that has the potential to impact on a European site, its qualifying features and its conservation objectives.

- A 'pathway' is defined as the means or route by which a source can affect the ecological receptor.
- A 'receptor' is defined as the SCI of SPAs or QI of SACs for which conservation objectives have been set for the European sites being screened.

A source-pathway-receptor model is a standard tool used in environmental assessment. In order for an effect to be likely, all three elements of this mechanism must be in place. The absence or removal of one of the elements of the mechanism results in no likelihood for the effect to occur. The source-pathway-receptor model was used to identify a list of European sites, and their QIs/SCIs, with potentially links to European site. These are termed as 'relevant' European sites/QIs/SCIs throughout this report.

5.5 Likely Significant Effect

The threshold for a Likely Significant Effect (LSE) is treated in the screening exercise as being above a *de minimis* level[4]. The opinion of the Advocate General in CJEU case C-258/11 outlines:

"the requirement that the effect in question be 'significant' exists in order to lay down a de minimis threshold. Plans or projects that have no appreciable effect on a European site are thereby excluded.

If all plans or projects capable of having any effect whatsoever on the site were to be caught by Article 6(3), activities on or near the site would risk being impossible by reason of legislative overkill."

In this report, therefore, 'relevant' European sites are those within the potential ZoI of activities associated with the construction and operation of the proposed development, where LSE pathways to European sites were identified through the source-pathway-receptor model.

5.6 Screening Process

The Screening for Appropriate Assessment will incorporate the following steps:

- Definition of the zone of influence for the proposed works;
- Identification of the European sites that are situated (in their entirety or partially or downstream) within the zone of influence of the proposed works;
- Identification of the most up-to-date QIs and SCIs for each European site within the zone of influence;
- Identification of the environmental conditions that maintain the QIs/SCIs at the desired target of Favourable Conservation Status;

[4] *Sweetman v. An Bord Pleanála* (Court of Justice of the EU, case C-285/11). A *de minimis* effect is a level of risk that is too small to be concerned with when considering ecological requirements of an Annex I habitat or a population of Annex II species present on a European site necessary to ensure their favourable conservation condition. If low level effects on habitats or individuals of species are judged to be in this order of magnitude and that judgment has been made in the absence of reasonable scientific doubt, then those effects are not considered to be likely significant effects

- Identification of the threats/impacts – actual or potential that could negatively impact the environmental conditions of the QIs/SCIs within the European sites;
- Highlighting the activities of the proposed works that could give rise to significant negative impacts; and
- Identification of other plans or projects, for which in-combination impacts would likely have significant effects.
- Receiving Environment

5.7 European Sites

Natura 2000 sites potentially affected by the proposed development site are listed below in **Table 1** and shown on **Figure 3**. It is noted that use of a 15km radius is a precautionary measure, as impacts at this distance from the proposed development are highly unlikely given the limited scale of the proposed development.

Figure 3: Natura 2000 Sites within 15km Radius of Proposed Development Site

The proposed development is not located within any Natura 2000 site. The site is located 5km of the Bandon River SAC (4.1km as the crow flies). Therefore, a potential source-pathway-receptor link has been identified between the source (proposed instream works) and the

receptor (Bandon River SAC) via a potential pathway (impacts on habitat quality and habitats via generation of silt and minor hydrocarbon spills from machinery).

The Bandon River SAC is of conservation significance for the occurrence of species that are listed on Annex II and habitats that are listed Annex 1 of the E.U. Habitats Directive. Further information on this site is provided below.

Given the limited scale of the proposed development, the lack of a hydrological connection, and the distances involved, no potential impact has been identified between the proposed development and any other Natura 2000 sites.

Table 1: Designated Sites and their Location Relative to the Proposed Works Area

Natura 2000 sites within the Zone of Influence (ZoI)	Code	Potential source-pathway-receptor links within 15km
Special Area of Conservation (SAC)		
Bandon River SAC	002171	The site is located 5km from the Bandon River SAC (4.1km as the crow flies).

5.9 Natura 2000 sites – Site synopsis.

5.9.1 Bandon River SAC (site code 002171)

The Bandon River SAC consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics.

The east-west exposure of Old Red Sandstone to the north of Dunmanway displays distinct ridgelines of bare rock with poor pasture and scrub. In this area around Lovers Leap the Bandon River cuts a narrow channel southwards, cascading over a series of rock steps through a narrow valley. Below this and above Long Bridge the river widens and meanders through a fertile floodplain. Immediately south of Long Bridge the reduced flow gradient and broad, flat valley permit the main channel to split and extend into a network of braided streams forming islands.

The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes):

- [3260] Floating River Vegetation
- [91E0] Alluvial Forests*
- [1029] Freshwater Pearl Mussel (Margaritifera margaritifera)
- [1096] Brook Lamprey (Lampetra planeri)

Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway. The river channels are well defined, and the islands appear solid. Canopy dominants are Hazel (Corylus avellana) and Sessile Oak (Quercus

petraea), with scattered Downy Birch (Betula pubescens), Ash (Fraxinus excelsior), Rusty Willow (Salix cinerea subsp. oleifolia) and Alder (Alnus glutinosa). There is a very sparse understorey composed of Hawthorn (Crataegus monogyna), Holly (Ilex aquifolium) and saplings of Hazel and Sessile Oak. Epiphytes are abundant on trees, including species such as Ivy (Hedera helix), Honeysuckle (Lonicera periclymenum) and bryophytes such as Isothecium myosuroides. The ground flora is dominated by Ramsons (Allium ursinum), Wood Anemone (Anemone nemorosa) and Ivy, along with Lesser Celandine (Ranunculus ficaria) and Irish Spurge (Euphorbia hyberna). Goldilocks Buttercup (Ranunculus auricomus), a very rare plant in Co. Cork, has been recorded from this woodland.

Floating river vegetation is found along the length of the river and is dominated by water-crowfoots (Ranunculus spp). Other aquatic plants found include Alternate Water-milfoil (Myriophyllum alterniflorum), Broad-leaved Pondweed (Potamogeton natans) and at least four water-starwort species (Callitriche spp.). Mosses present on rocks and attached to tree roots include Fontinalis antipyretica in slack flow areas, and Fontinalis squamosa, Rhynchostegium riparioides and Amblystegium riparium in moderate flows. The landward fringe of deep pools supports Yellow Water-lily (Nuphar lutea), Bogbean (Menyanthes trifoliata), Marsh-marigold (Caltha palustris), Water Mint (Mentha aquatica) and Fool's Water-cress (Apium nodiflorum). Shoreweed (Littorella uniflora) and Six-stamened Waterwort (Elatine hexandra) are two species of local importance which are found in the river. In moderate current flow below the Long Bridge, the larger stones are covered by the moss Brachythecium rivulare and the liverwort Chiloscyphus polyanthos var. polyanthos. Boulders covered in Nostoc algae are probably of local occurrence in Ireland. The liverwort Riccardia chamaedryfolia and the moss Fissidens crassipes found under the Long Bridge are considered to be rare in Ireland.

Heath in mosaic with wet grassland, exposed rock, scrub and improved grassland covers up to 30% of the site north of Long Bridge. Typical heath plants growing in association with the rocks are abundant Western Gorse (Ulex gallii), Heather (Calluna vulgaris), Bell Heather (Erica cinerea), Cross-leaved Heath (Erica tetralix), Tormentil (Potentilla erecta), Heath-grass (Danthonia decumbens), stonecrops (Sedum spp.), small amounts of St Patrick's-cabbage (Saxifraga spathularis) and many lichen species.

Some small areas of woodland occur within the site north of Long Bridge. Tree species such as Sessile Oak, Beech (Fagus sylvatica), Scots Pine (Pinus sylvestris) and Downy Birch are found with an understorey of Holly, Hazel, Rowan and Rusty Willow.

Two Red Data Book plant species have been recorded in the past from within or close to the site - Greater Broomrape (Orobanche rapum-genistae), a species that grows on the roots of legumes, and Small-white Orchid (Pseudorchis albida), a species of upland pastures and heaths that is protected under the Flora (Protection) Order, 1999.

The river below Long Bridge is an important inland site in Cork for Mute Swan and approximately 20 individuals are present throughout the year along this stretch. Several hundred Snipe use the site during the winter. Other birds seen regularly within the site are Grey Heron, Cormorant and Mallard, while low numbers of Lapwing and Teal visit during the winter. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river.

A population of Freshwater Pearl Mussel is found in the river. This species is listed on Annex II of the E.U. Habitats Directive. The river also supports populations of protected fish species, notably Brook Lamprey and Salmon (Salmo salar), both of which are also listed on Annex II of the E.U. Habitats Directive.

The site also supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Badger, Irish Hare, Daubenton's Bat and Pipistrelle bat. The two bat species can be seen feeding along the river and roosting under the old bridges. Otter, another species listed on Annex II of the E.U. Habitats Directive, is also found within the site.

Land use at the site consists mainly of sheep grazing in the northern section and cattle grazing on improved grasslands below Lovers Leap and further south. In the area between Milleenanannig and Bealaboy Bridge land reclamation and drainage is taking place. In the area of exposed rock on the higher terrain above Ardcahan Bridge some land reclamation and forestry is carried out.

This site contains good examples of two habitats listed on Annex I of the E.U. Habitats Directive - alluvial forest and floating river vegetation - and supports populations of four Annex II species - Otter, Salmon, Brook Lamprey and Freshwater Pearl Mussel. The presence of a number of Red Data Book plant and animal species adds further interest to the site.

5.9.2 Natura 2000 sites – Features of interests and conservation objectives.

The EU Habitats Directive contains a list of habitats (Annex I) and species (Annex II) for which SACs must be established by Member States. Similarly, the EU Birds Directive contains lists of important bird species (Annex I) and other migratory bird species for which SPAs must be established. Those that are known to occur at a site are referred to as 'qualifying interests' and are listed in the Natura 2000 forms which are lodged with the EU Commission by each Member State. A 'qualifying interest' is one of the factors (such as the species or habitat that is present) for which the site merits designation. The National Parks and Wildlife Service (NPWS) are responsible for the designation of SACs and SPAs in Ireland.

The overall aim of the Habitats Directive is to maintain or restore the favourable conservation status of habitats and species of community interest. These habitats and species are listed in the Habitats and Birds Directives and Special Areas of Conservation and Special Protection Areas are designated to afford protection to the most vulnerable of them. These two designations are collectively known as the Natura 2000 network. European and national legislation places a collective obligation on Ireland and its citizens to maintain at favourable conservation status sites designated as Special Areas of Conservation and Special Protection Areas. The Government and its agencies are responsible for the implementation and enforcement of regulations that will ensure the ecological integrity of these sites.

The maintenance of habitats and species within Natura 2000 sites at favourable conservation condition will contribute to the overall maintenance of favourable conservation status of those habitats and species at a national level. Favourable conservation status of a habitat is achieved when its natural range, and area it covers within that range, is stable or increasing, and the ecological factors that are necessary for its long-term maintenance exist and are likely to continue to exist for the foreseeable future, and the conservation status of its typical species is favourable.

The favourable conservation status of a species is achieved when population data on the species concerned indicate that it is maintaining itself, and the natural range of the species is neither being reduced or likely to be reduced for the foreseeable future, and there is, and will probably continue to be, a sufficiently large habitat to maintain its populations on a long-term

basis. The species and habitats listed as qualifying interests for the Bandon River SAC are included in **Table 2** and **3**.

Table 2. Qualifying habitats for the Bandon River SAC

Habitat Code	Habitat	Conservation objective
3260	Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation	Maintain/Restore
91E0	Alluvial forests with Alnus glutinosa and *Fraxinus excelsior* (*Alno-Padion, Alnion incanae, Salicion albae*) *	Maintain/Restore

Restore = Restore favourable conservation condition, Maintain = Restore favourable conservation condition

Table 3: Features of Interest for the Bandon River SAC

Species code	Species	Scientific name	Conservation objective
1029	Freshwater Pearl Mussel	*Margaritifera margaritifera*	Maintain/Restore
1096	Brook Lamprey	*Lampetra planeri*	Maintain/Restore

Restore = Restore favourable conservation condition, Maintain = Restore favourable conservation condition

4.9.4 Status of qualifying species and habitats for the Bandon River SAC

Freshwater pearl mussel (*Margaritifera margaritifera*)

Margaritifera margaritifera is one of two European species of pearl mussel which are now on the International Union for the Conservation of Nature and Natural Resources (I.U.C.N.) red data list. M. margaritifera has Council of Europe protection under the Convention on the Conservation of European Wildlife and Natural Habitats (Bern convention). The European Union Directive on the Conservation of Natural and Semi-Natural Habitats and of Wild Fauna and Flora (Habitats Directive) lists M. margaritifera under Annex II (species whose conservation requires the designation of special conservation areas) and Annex V (species whose taking in the wild and exploitation may be subject to management measures). Under Irish law, it is illegal to interfere with M. margaritifera (Statutory Instrument No. 112, 1990).

Sedimentation, nutrient enrichment and alteration to the natural flow regime from a number of land uses and other activities have contributed significantly to this decline.

There as yet has not been a full survey of the mussel distribution or potential habitat in the Bandon catchment. Although incomplete, the distribution of pearl mussel in the Bandon River is known to be widespread, with records from as high as Cullenagh Lake to as low as Bandon Town. *NS2 (2010). Freshwater Pearl Mussel Second Draft Bandon Sub-Basin Management Plan* listed surveys carried out in the previous years as follows:

I. *A survey by RPS Cairns in 1996, was carried out on a 1.5 km section upstream of Dunmanway for an Environmental Impact Assessment for the Bandon River (Dunmanway) Drainage Scheme to relieve flooding in the Dunmanway area.*
II. *A survey carried out by Gittings et al., 1998 as part of a census of the pearl mussel in a 1.6km stretch of lowland river in the vicinity of Dunmanway, as part of the environmental impact study for a flood relief scheme found that the total population of*

the 1.6 km stretch was estimated to be 14,194 with four juveniles recorded (less than 30 mm and approximately 7 years or younger).

III. *Three monitoring exercises were carried out on permanently marked transects by Ross in 2001, 2003 and 2005 as part of monitoring for engineering works associated with the OPW Bandon River (Dunmanway) Drainage Scheme. A total of 519 mussels were removed from the river between Dunmanway Bridge and a riffle at the upper end of the impacted stretch. Mussels were observed to range in size from 37.9 mm to 126 mm. This related to approximately eight years of age and upwards. Ross (2005) noted, from repeated monitoring of transects, that a low level of mortality was observed among the 10 marked mussels previously resident at the relocation site, and the 30 marked mussels transplanted into the area, and concluded that significant unnatural levels of mortality had not occurred since the relocation process was undertaken during June 2000.*

IV. *In 2009, Paul Johnston Associates conducted an electrofishing exercise to assess whether fish bearing glochidia were present in the river. One site on the Bandon and one on the Caha River were surveyed on 13th May 2009. In the Bandon site, 6 trout and 33 salmon were counted, and none were found to be encysted with glochidia. This suggests that although good numbers of fish are present, the mussel population may be too stressed to brood glochidia to maturity.*

Although the exact population of this species within the Bandon catchment is uncertain the available evidence suggests that population is in unfavourable conservation status and is expected to decline as time proceeds. It is currently ranked as 14th out of the 27 Freshwater Pearl Mussel SAC populations in the country on the basis of population status, habitat condition and current pressures. The population of Margaritifera in the Bandon and Caha is not likely to be in favourable condition, based on most recent available information from surveys in 2005 and on habitat surveys in 2009. Its demographic profile is poor and there is an absence of juveniles and rarity of small mussels throughout the catchment. The catchment fails three out of the five Environmental Quality Objectives (EQOs) as specified in Schedule 4 of the European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations, S.I. 296 of 2009(NS2, 2010).

Atlantic Salmon regularly occurs within the Bandon River and is intrinsically linked to the complex life cycle of the Freshwater Pearl Mussel. Glochidia, which are the arval stage of the Freshwater Pearl Mussel, are released each year by the female mussel into the open water in high numbers in an event lasting one to two days between July and September. A small percentage of the glochidia released to the river will be inhaled by passing salmonid fish which act as the pearl mussels' temporary hosts. Glochidia are simple organisms with little more than a pair of shells, an adductor muscle to snap them shut, and a layer of cells which can absorb and digest nutrients. The valves close on a filament of the salmonid gills, and nourishment is taken from this fish host until the glochidia are large and mature enough to exist independently. Those glochidia that survive on the fish develop into young mussels. They fall off in early summer (normally June) and bury into gravel, remaining buried for about five years, until large enough to withstand the flow of open water, moving stone, and perhaps trout predation. Only about 5% of young mussels falling off fish survive to reach three to six years of age in rivers capable of supporting recruitment. The retention of a glochidial stage is unusual for a creature living in fast flowing water. Most freshwater molluscs have developed means of depositing eggs safely in gelatinous masses or attached to aquatic vegetation, but pearl mussels release

free glochidia downstream, and rely on the salmonid host to keep the glochidia from flowing to the sea.

Brook Lamprey (*Lampetra planeri*)

The brook lamprey is the smallest of the three lamprey species native to Ireland and it is the only one of the three species that is non-parasitic and spends all its life in freshwater (Maitland & Campbell 1992). The brook lamprey is the most abundant and widespread of the lampreys of the British Isles, and still present in many areas throughout Northern Europe where other lamprey species have gone extinct. Brook lamprey is listed in Appendix II of the Habitats Directive (92:43: EEC and is listed in Appendix III of the Berne Convention.

Large numbers of lamprey are known to occur upstream of the Carbery Facility, in proximity to Dunmanway (King et al., 2008). The lower River Bandon also has exception juvenile lamprey populations with the densities of juvenile lampreys (River/Brook) recorded considered to be exceptional, and amongst the highest ever recorded in Ireland. Bandon weir has been identified as being an impassable barrier to lampreys, and the lampreys upstream of this weir are identified as brook lampreys (Ecofact, 2011).

Brook lamprey is expected to be present in the Bandon River downstream the proposed development site.

Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation.

The EU (2003) definition of the habitat water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitricho-Batrachion* vegetation is very broad. There is no satisfactory definition of the habitat and its sub-types or their distribution in Ireland and a lack of relevant monitoring data concerning the habitat. This habitat occurs only in freshwater and can be found over a wide range of physical conditions, from acid, oligotrophic, flashy upland streams dominated by bryophytes to more eutrophic, slow flowing streams dominated by *Ranunculus* and *Callitriche* species. While the former will be sensitive to diffuse pollution the latter, especially in shallow streams, will be relatively more resistant.

This habitat type is commonly distributed along the main Bandon channel and within its tributaries and includes species such as Water-milfoil (*Myriophyllum alterniflorum*), Broad-leaved Pondweed (*Potamogeton natans*) and at least four water-starwort species (*Callitriche spp.*). This habitat is expected to occur in the main Bandon channel at various locations downstream of the proposed development although the quality and thus the value of this habitat is very variable. This habitat occurs within the Bandon River SAC downstream of the proposed works.

Other qualifying habitats.

The designated habitat for the Bandon River SAC; Alluvial forests with Alnus glutinosa and Fraxinus excelsior (Alno-Padion, Alnion incanae, Salicion albae), occurs downstream of the proposed development site. No theoretical impact on this habitat has been identified.

Qualifying SAC habitats and species potentially affected.

Based on the information outlined above potential impacts could potentially arise for Freshwater Pearl Mussel, Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Brook Lamprey.

5.10 Water Quality

5.10.1 EPA Biological Monitoring

Water quality is a key supporting element for aquatic qualifying interests for the Bandon River SAC and therefore any impacts on water quality have the potential to negatively impact on qualifying species and habitats within this site.

The Environmental Protection Agency carries out a biological assessment of most river channels in the country on a regular basis. The assessments are used to derive Q values, indicators of the biological quality of the water. The biological health of a watercourse provides an indication of long-term water quality. The EPA Q value scheme is summarised in **Table 4**. The relationship between the Q-rating system and the Water Framework Directive classification as defined by the Surface Waters Regulations 2009 (S.I. 272 of 2009) is shown in **Table 5**.

Table 1: EPA Biotic Index Scheme

Q value	Water quality	Pollution	Condition
5	Good	Unpolluted	Satisfactory
4	Fair	Unpolluted	Satisfactory
3	Doubtful	Moderately polluted	Unsatisfactory
2	Poor	Seriously polluted	Unsatisfactory
1	Bad	Seriously polluted	Unsatisfactory

Source: EPA

The Q Value system which is used by the Environmental Protection Agency describes the relationship between water quality and the macro-invertebrate community in numerical terms. The presence of pollution causes changes in flora and fauna of rivers. Well documented changes occur in the macro-invertebrate community in the presence of organic pollution: sensitive species are progressively replaced by more tolerant forms as pollution increases. Q5 waters have a high diversity of macro-invertebrates and good water quality, while Q1 have little or no macro-invertebrate diversity and unsatisfactory water quality.

The intermediate ratings Q1-2, Q2-3, Q3-4 and Q4-5 are used to denote transitional conditions, while ratings within parenthesis indicate borderline values. Great importance is attached to the EPA biotic indices, and consequently it is these data that are generally used to form the basis of water quality management plans for river catchments. EPA biological monitoring data for the monitoring locations near the proposed development site are shown in **Figure 4**.

Table 2: Correlation Between the WFD Classification and Q Values

Ecological status WFD	Q Values
High	Q5, Q4-5
Good	Q4
Moderate	Q3-4
Poor	Q3, Q2-3
Bad	Q2, Q1

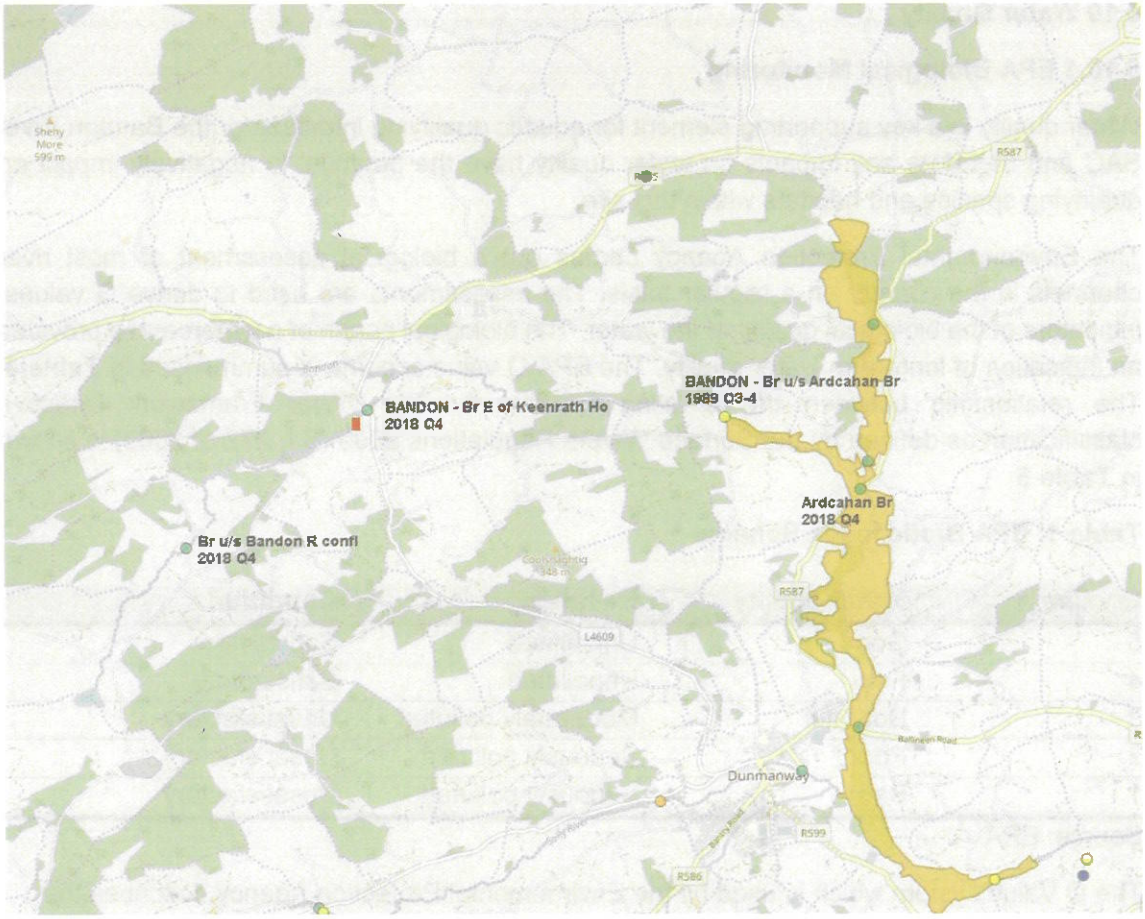

Figure 4 Location of EPA Water Quality Monitoring Stations and River Network

The 2018 biological monitoring results from the River Bandon indicate that water quality was classed as satisfactory (Q4) at the closest monitoring sites upstream and downstream of the proposed development.

5.10.2 Water Framework Directive

The Water Framework Directive (WFD) sets out the environmental objectives which are required to be met through the process of river basin planning and implementation of those plans. Specific objectives are set out for surface water, groundwater and protected areas. The challenges that must be overcome in order to achieve those objectives are very significant. Therefore, a key purpose of the River Basin Management Plan (RBMP) is to set out priorities and ensure that implementation is guided by these priorities.

The second-cycle RBMP aims to build on the progress made during the first cycle. Key measures during the first cycle included the licensing of urban waste-water discharges (with an associated investment in urban waste-water treatment) and the implementation of the Nitrates Action Programme (Good Agricultural Practice Regulations). The former measure has resulted in significant progress in terms both of compliance levels and of the impact of urban waste-water on water quality. The latter provides a considerable environmental baseline which all Irish farmers must achieve and has resulted in improving trends in the level of nitrates and phosphates in rivers and groundwater. It is acknowledged, however, that sufficient progress has not been made in developing and implementing supporting measures during the first cycle.

Overall, RBMP assesses the quality of water in Ireland and presents detailed scientific characterisation of our water bodies. The characterisation process also takes into account wider water quality considerations, such as the special water-quality requirements of protected areas. The characterisation process identifies those water bodies that are *At Risk* of not meeting the objectives of the WFD, and the process also identifies the significant pressures causing this risk. Based on an assessment of risk and pressures, a programme of measures has been developed to address the identified pressures and work towards achieving the required objectives for water quality and protected areas.

Water Framework Directive data is provided below in **Table 6**. Given the limited scope of the proposed development and the dilution provided in the riverine environment, the impact from the proposed works on water quality is predicted to be negligible.

Table 6. Water Framework Directive data

Location	Water Framework Directive Status, Risk Score and objective
Bandon (WaterBody Code:IE_SW_20_2230_1)	• Water quality status - Moderate • Overall Risk: 1a – At risk of not achieving Good Status.

Source: http://www.wfdireland.ie/

5.11. Site inspection

Site inspections were carried out on the 17th of December 2019 and 4th of April 2020 to identify the habitats, flora and fauna present at the site. The terrestrial and aquatic habitats within or adjacent to the proposed development site were classified using the classification scheme outlined in the Heritage council publication *A Guide to Habitats in Ireland* (Fossitt, 2000) and cross referenced with Annex 1 Habitats where required.

The habitat of primary concern within this general area is the Bandon River (Eroding River FW1). Within the landholding, land clearance took place over the last number of years and now this area is dominated by recently reseeded grassland dominated by rye grass (Improved agricultural grassland GA1). This habitat is of low ecological value. Following land reclamation, rock armour was installed along sections of the riverbank in proximity to the proposed development. The rock armour is approximately 2m high and some recolonization by common grass and herbaceous species is occurring. The rock armour is stable, and no signs of erosion were recorded along the section of bank which adjoins the proposed development. Small areas of residual grassland along the edge of the river support woodland species such as wood anemone and lesser celandine.

Woodland which overall is classified as Oak-Holly-Birch WN1 remains in place on the opposing (northern) bank of the river, however across from the proposed development area beech is dominant. In general, this section of the river is characterized by a natural riffle glide sequence, with a mixed gravel substate, however a slow deep glide is the dominant habitat in immediate proximity to the proposed development. Habitat quality within the river is considered high.

The proposed shed will be constructed on an area of hard standing (Spoil and bare ground ED2) which is of recent origin and which is separated from the river by the aforementioned

rock armour. The ground is compacted with some regrowth of grass starting to occur and given that it is flat, with only small patches of loose soil and generally well compacted, the risk of high levels of entrained silt in surface water run-off is low. There are currently some silage bales stored on the site which are approximately 15m back from the river and there is also a shipping container and wood stored on the site. No invasive species were recorded.

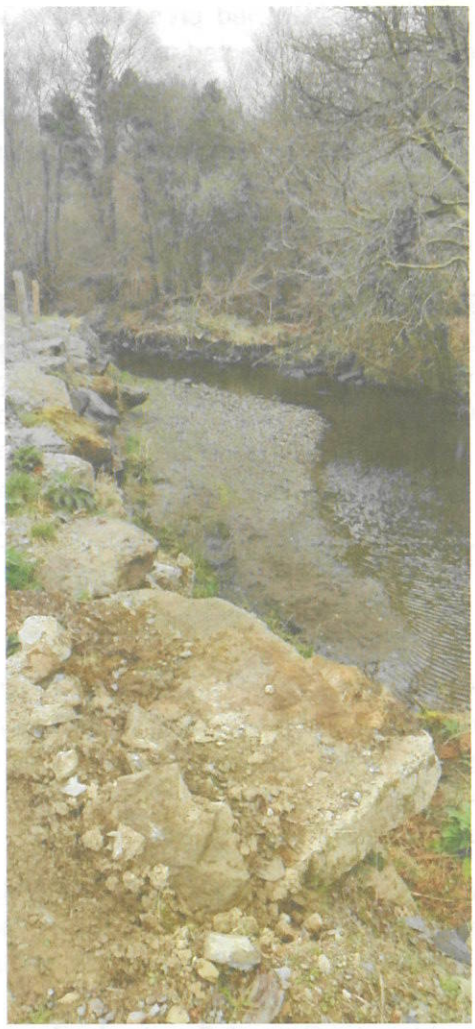

Figure 5 Rock armour adjoining the proposed development area with some recolonization occurring. Deeper glide section of the Bandon River also evident.

Figure 6 showing hard standing area with some natural recolonisation starting to occur and woodland evident on opposing bank.

6. Assessment of Potential Impacts

The potential impacts associated with the proposed development are discussed in the following section with respect to their likelihood to have significant impacts on Natura 2000 sites. As part of the assessment direct, indirect and cumulative impacts were considered. Direct impacts refer to habitat loss or fragmentation arising from land-take requirements for development. Indirect and secondary impacts do not have a straight-line route between cause and effect, and it is potentially more challenging to ensure that all the possible indirect impacts of the project/plan - in combination with other plans and projects have been established.

As part of the assessment the potential for impacts associated with the development were reviewed as outlined below:

- Loss of Habitat
- Impacts on Water Quality and aquatic ecology
- Impacts on hydrology
- Cumulative Impacts

6.1 Loss of habitat

The site is not located within a designated site and the habitats recorded within the proposed development boundary do not correspond to habitats listed on Annex 1 of the Habitats Directive or qualifying habitats for the Bandon River SAC. The river habitats are however considered of high ecological value. The proposed development will not result in any loss of habitat within Natura 2000 sites.

6.2 Impacts on Water Quality

Potential impacts on aquatic habitats which can arise from this type of development include increased silt levels in surface water run-off, inadvertent spillages of hydrocarbons from fuel and hydraulic fluid and run-off of uncured cement. The duration and extent of the impact

however is hard to predict as it is influenced by many abiotic factors such as dilution, particle size and turbulence.

High levels of silt in surface water run-off can impact in particular on fish species, in particular salmonids. If of sufficient severity, adult fish could theoretically be affected by increased silt levels as gills may become damaged by exposure to elevated suspended solids levels. Excessive siltation can cause eggs and fry to be smothered. If of sufficient severity, aquatic invertebrates may be smothered by excessive deposits of silt from suspended solids. In areas of stony substrate, silt deposits may result in a change in the macro-invertebrate species composition, favouring less diverse assemblages and impacting on sensitive species. Aquatic plant communities may also be affected by increased siltation. Submerged plants may be stunted, and photosynthesis may be reduced.

Inadvertent spillages of hydrocarbons and cement during construction could introduce toxic chemicals into the aquatic environment for leaks of fuel or hydraulic fluid can have a direct toxicological impact on habitats and fauna.

Issues relating to silt and hydrocarbons, if of sufficient severity, could potentially impact on water quality and thus could impact on Freshwater Pearl Mussel, Water courses of plain to montane levels with the Ranunculion fluitantis and Callitricho-Batrachion vegetation and Brook Lamprey. Impacts on salmonid species, which are of importance during the early stages of the Freshwater Pearl Mussel lifecycle, could have indirect effects on Freshwater Pearl Mussel.

Impacts on water quality associated with the construction of the shed within an already highly modified habitat will be negligible. The site is flat with consolidated ground and minimal risk of significant surface water run-off. The method of construction i.e. poured concrete base and metal construction will allow the shed to be constructed quickly and with minimal ground disturbance.

The shed will be used for the storage of farm machinery and equipment, fencing materials and hay and/or straw. The shed will not be used for the storage of hydrocarbons, silage or animal waste and only clean water from roofs will percolated to ground or will discharge to the adjoin river via overland flow over consolidated ground.

Overall, the construction of the shed and usage of the shed once constructed will have a negligible effect on water quality in the Bandon River. The proposed development site is located 5km from the Bandon River SAC via the hydrological connection and (4.1km as the crow flies. The proposed shed will be located 12m from the river. Given that the proposed development will have a negligible impact on water quality and given the distance to the Bandon River SAC no significant adverse effect on the qualifying interests and conservation objectives for the Bandon River SAC will occur.

6.2 Impacts on hydrology

The proposed development is located on ground which is significantly elevated above the river and therefore no flood risk has been identified. The shed will have a surface area of 192m^2 and will occupy an area of hardstanding. There will be no significant increase in surface water run-off associated with the project and the proposed development will no impact on local hydrology. Given the absence of a significant impact on hydrology/flow conditions within the river no significant adverse effect on the qualifying interests and conservation objectives for the Bandon River SAC will occur.

6.3 Cumulative Impacts/In Combination Effects

Cumulative impacts refer to a series of individual impacts that may, in combination, produce a significant impact. The underlying intention of this in combination provision is to take account of cumulative impacts from existing or proposed plans and projects and these will often only occur over time. The proposed works could theoretically create a cumulative impact. Other developments relevant to the proposed development and potential cumulative impacts are listed in **Table 7**.

The potential for the proposed development to indirectly impact the Bandon River SAC has been assessed. Potential cumulative impacts on the site may arise owing to an alteration to water quality or quantity. Deterioration in water quality can occur as an indirect consequence of point source or diffuse pollution, which in turn changes the aquatic environment and reduces its capacity to support certain plants and animals. This leads to potential negative consequences for the qualifying interests that rely on the maintenance of water quality within the Natura 2000 site.

The area surrounding the proposed development is largely agricultural in nature. The construction and operational stage of the proposed development will not impact on surface water or groundwater quality and thus will not have an effect on the qualifying interests and conservation objectives for the Bandon River SAC. In the absence of any significant potential impacts on the qualifying interests and conservation interests for the Bandon River no potential cumulative impacts from the proposed works have been identified.

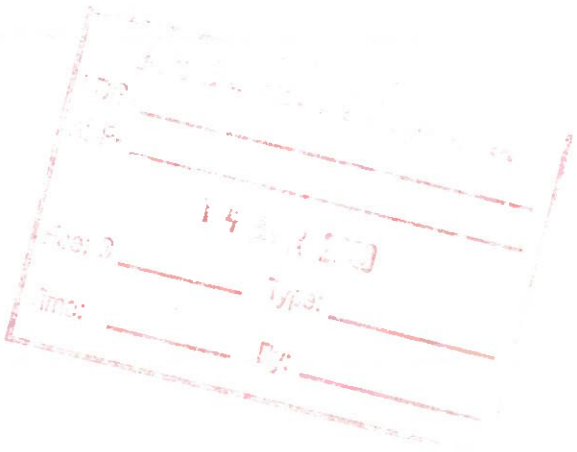

Table 7: Other Projects and Plans that could Result in Potential Cumulative Impacts

Plans and Projects - Key Policies/Issues/Objectives Directly Related to the Conservation of the European Network		
River Basin Management Plan 2018-2021	The project should comply with the environmental objectives of the Irish RBMP which are to be achieved generally by 2021. • Ensure full compliance with relevant EU legislation • Prevent deterioration • Meeting the objectives for designated protected areas • Protect high status waters • Implement targeted actions and pilot schemes in focus sub-catchments aimed at: targeting water bodies close to meeting their objective and addressing more complex issues which will build knowledge for the third cycle.	The implementation and compliance with key environmental policies, issues and objectives of this management plan will result in positive in-combination effects to European sites. The implementation of this plan will have a positive impact for the biodiversity. It will not contribute to in-combination or cumulative impacts with the proposed development.
Inland Fisheries Ireland Corporate Plan 2016 - 2020	To ensure that Ireland's fish populations are managed and protected to ensure their conservation status remains favourable. That they provide a basis for a sustainable world class recreational angling product, and that pristine aquatic habitats are also enjoyed for other recreational uses. To develop and improve fish habitats and ensure that the conditions required for fish populations to thrive are sustained and protected To grow the number of anglers and ensure the needs of IFI's other key stakeholders are being met in a sustainable conservation focused manner.	The implementation and compliance with key environmental issues and objectives of this corporate plan will result in positive on-combination effects to European sites. The implementation of this corporate plan will have a positive impact for biodiversity of inland fisheries and ecosystems. It will not contribute to in-combination or cumulative impacts with the proposed works.
The Inland Fisheries Act 2010.	EU (Quality of Salmonid Waters) Regulations 1988. All works during development and operation of the project must aim to conserve fish and other species of fauna and flora habitat; biodiversity of inland fisheries and ecosystems and protect spawning salmon and trout.	
Irish Water Capital Investment Plan 2014-2016	Proposals to upgrade and secure water services and water treatment services countrywide.	Likely net positive impact due to water conservation and more effective treatment of water.
Water Services Strategic Plan (WSSP, 2015)	Irish Water has prepared a Water Services Strategic Plan (WSSP, 2015), under Section 33 of the Water Service No. 2 Act of 2013 to address the delivery of strategic objectives which will contribute towards improved water quality and biodiversity requirements through reducing: • Habitat loss and disturbance from new / upgraded infrastructure; • Species disturbance; • Changes to water quality or quantity; and • Nutrient enrichment /eutrophication.	The WSSP forms the highest tier of asset management plans (Tier 1) which Irish Water prepare, and it sets the overarching framework for subsequent detailed implementation plans (Tier 2) and water services projects (Tier 3). The WSSP sets out the challenges we face as a country in relation to the provision of water services and identifies strategic national priorities. It includes Irish Water's short, medium and long-term objectives and identifies strategies to achieve these objectives. As such, the plan provides the context for subsequent detailed implementation plans (Tier 2) which will document the approach to be used for key water service areas such as water resource management, wastewater compliance and sludge management. The WSSP also sets out the strategic objectives against which the Irish Water Capital Investment Programme (CIP) is developed.

		The current version of the CIP outlines the proposals for capital expenditure in terms of upgrades and new builds within the Irish Water owned assets. The overarching strategy was subject to AA and highlighted the need for additional plan/project environmental assessments to be carried out at the tier 2 and tier 3 level. No cumulative effect will occur.
WWTP discharges	Dunmanway WWTP discharges to the Bandon River SAC.	Discharges from municipal WWTPs are required to meet water quality standards. Irish Water Capital Investment Plan 2014-2016 and 2017 – 2021 proposes to upgrade water treatment services countrywide. No cumulative effect will occur.
Industrial Applications Under consideration	There are no records for industrial applications in proximity to the site within the last 5 years.	Future developments will only be granted permission where discharges from same meet with relevant water quality standards. No cumulative effect will occur.
Residential Applications	According to the Cork County Development plant (2017), the vision for Dunmanawy is to secure a modest increase in the population of the settlement and to strengthen the role of Dunmanway as an important centre of population, recreation, amenity and services Throughout the catchment planning's are routinely granted for one off dwellings, farm buildings etc.	Future developments will only be granted permission where discharges from same meet with relevant water quality standards. No cumulative effect will occur.
Other works Within landholding	Some reclamation works have occurred in the past but there are no significant ongoing residual impacts on water quality and natural colonisation of disturbed habitats is occurring.	The proposed development will not have an adverse effect on water quality or habitat quality No cumulative effect will occur.

7. Conclusions

This AA screening report has been prepared to assess whether the proposed development, individually or in-combination with other plans or projects, and in view of best scientific knowledge, is likely to have a significant effect on any European site(s).

The screening exercise was completed in compliance with the relevant European Commission guidance, national guidance, and case law. The potential impacts of the proposed development have been considered in the context of the European sites potentially affected, their qualifying interests or special conservation interests, and their conservation objectives.

Through an assessment of the source-pathway-receptor model, which considered the ZoI of effects from the proposed development and the potential in-combination effects with other plans or projects, the following findings were reported:

- The proposed development, either alone or in-combination with other plans and/or projects, does not have the potential to significantly affect any European Site, in light of their conservation objectives. Therefore, a Stage 2 Appropriate Assessment is deemed not to be required.

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Appendix 1 Site Synopsis

Site Name: Bandon River SAC

Site Code: 002171

The Bandon River SAC consists of relatively short adjoining stretches of the Bandon and Caha Rivers. These rivers flow in a southerly direction to the east of Dunmanway, Co. Cork. Towards the southern end of the site the Bandon River takes an easterly course. The predominant rock formations are Old Red Sandstone to the north and Carboniferous slate stretching south of Dunmanway. Soils in the northern section consist of peats, podzols and skeletal soils. The southern section consists of alluvial soils and Brown Podzolics. The east-west exposure of Old Red Sandstone to the north of Dunmanway displays distinct ridgelines of bare rock with poor pasture and scrub. In this area around Lovers Leap the Bandon River cuts a narrow channel southwards, cascading over a series of rock steps through a narrow valley. Below this and above Long Bridge the river widens and meanders through a fertile floodplain. Immediately south of Long Bridge the reduced flow gradient and broad, flat valley permit the main channel to split and extend into a network of braided streams forming islands. The site is a Special Area of Conservation (SAC) selected for the following habitats and/or species listed on Annex I / II of the E.U. Habitats Directive (* = priority; numbers in brackets are Natura 2000 codes): [3260] Floating River Vegetation [91E0] Alluvial Forests* [1029] Freshwater Pearl Mussel (Margaritifera margaritifera) [1096] Brook Lamprey (Lampetra planeri) Wet broadleaved semi-natural woodland is found in an undisturbed area of braided river channels and islands below Dunmanway.

The river channels are well defined, and the islands appear solid. Canopy dominants are Hazel (Corylus avellana) and Sessile Oak (Quercus petraea), with scattered Downy Birch (Betula pubescens), Ash (Fraxinus excelsior), Rusty Willow (Salix cinerea subsp. oleifolia) and Alder (Alnus glutinosa). There is a very sparse understorey composed of Hawthorn (Crataegus monogyna), Holly (Ilex aquifolium) and saplings of Hazel and Sessile Oak. Epiphytes are abundant on trees, including species such as Ivy (Hedera helix), Honeysuckle (Lonicera periclymenum) and bryophytes such as Isothecium myosuroides. The ground flora is dominated by Ramsons (Allium ursinum), Wood Anemone (Anemone nemorosa) and Ivy, along with Lesser Celandine (Ranunculus ficaria) and Irish Spurge (Euphorbia hyberna). Goldilocks Buttercup (Ranunculus auricomus), a very rare plant in Co. Cork, has been recorded from this woodland. Version date: 16.12.2013 2 of 3 002171_Rev13.Doc Floating river vegetation is found along the length of the river and is dominated by water-crowfoots (Ranunculus spp). Other aquatic plants found include Alternate Water-milfoil (Myriophyllum alterniflorum), Broad-leaved Pondweed (Potamogeton natans) and at least four water-starwort species (Callitriche spp.).

Mosses present on rocks and attached to tree roots include Fontinalis antipyretica in slack flow areas, and Fontinalis squamosa, Rhynchostegium riparioides and Amblystegium riparium in moderate flows. The landward fringe of deep pools supports Yellow Water-lily (Nuphar lutea), Bogbean (Menyanthes trifoliata), Marsh-marigold (Caltha palustris), Water Mint (Mentha aquatica) and Fool's Water-cress (Apium nodiflorum). Shoreweed (Littorella uniflora) and Six-stamened Waterwort (Elatine hexandra) are two species of local importance which are found in the river. In moderate current flow below the Long Bridge, the larger stones are covered by the moss Brachythecium rivulare and the liverwort Chiloscyphus polyanthos var. polyanthos. Boulders covered in Nostoc algae are probably of local occurrence in Ireland. The

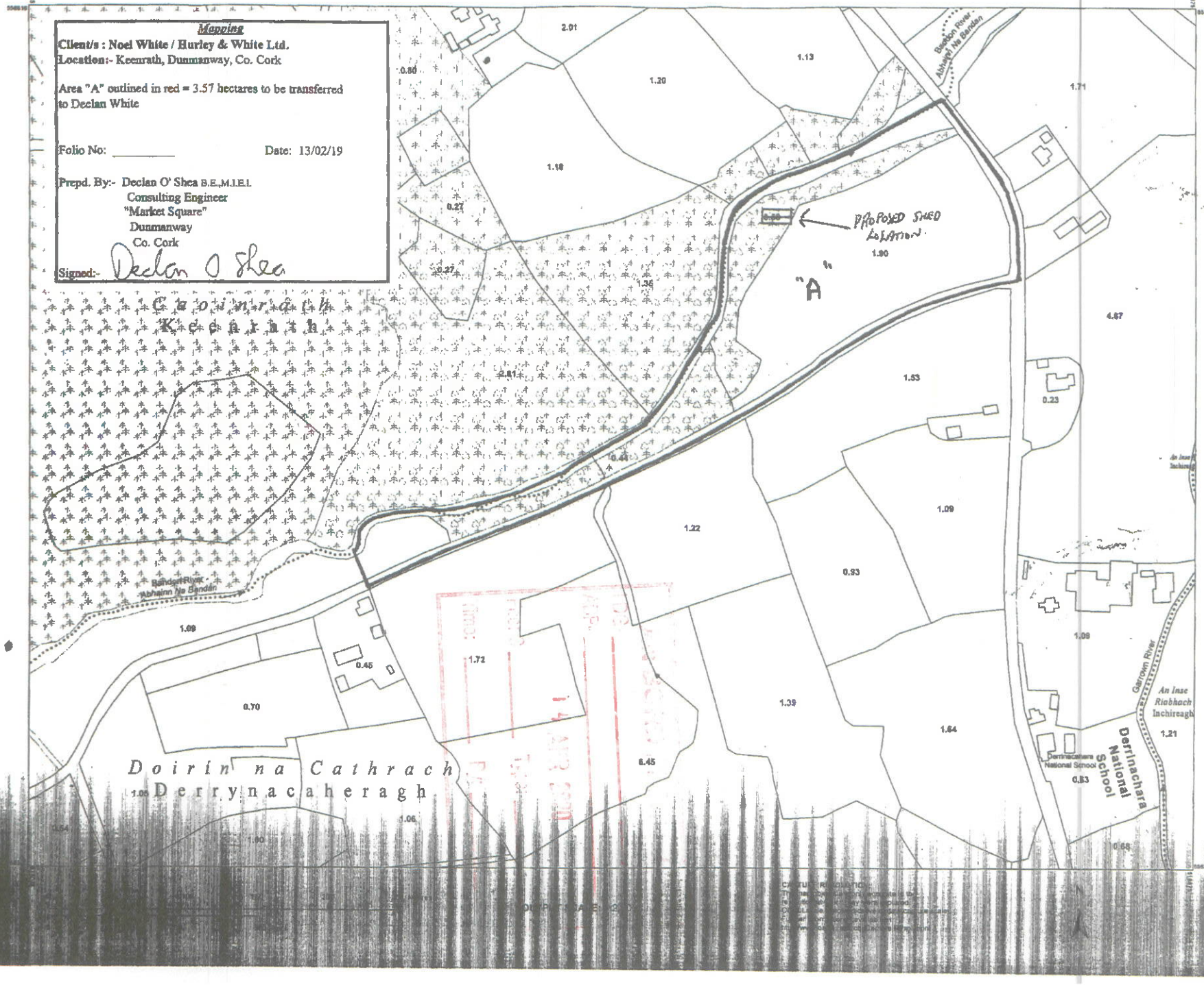
liverwort Riccardia chamaedryfolia and the moss Fissidens crassipes found under the Long Bridge are considered to be rare in Ireland. Heath in mosaic with wet grassland, exposed rock, scrub and improved grassland covers up to 30% of the site north of Long Bridge. Typical heath plants growing in association with the rocks are abundant Western Gorse (Ulex gallii), Heather (Calluna vulgaris), Bell Heather (Erica cinerea), Cross-leaved Heath (Erica tetralix), Tormentil (Potentilla erecta), Heath-grass (Danthonia decumbens), stonecrops (Sedum spp.), small amounts of St Patrick's-cabbage (Saxifraga spathularis) and many lichen species. Some small areas of woodland occur within the site north of Long Bridge. Tree species such as Sessile Oak, Beech (Fagus sylvatica), Scots Pine (Pinus sylvestris) and Downy Birch are found with an understorey of Holly, Hazel, Rowan and Rusty Willow.

Two Red Data Book plant species have been recorded in the past from within or close to the site - Greater Broomrape (Orobanche rapum-genistae), a species that grows on the roots of legumes, and Small-white Orchid (Pseudorchis albida), a species of upland pastures and heaths that is protected under the Flora (Protection) Order, 1999. The river below Long Bridge is an important inland site in Cork for Mute Swan and approximately 20 individuals are present throughout the year along this stretch. Several hundred Snipe use the site during the winter. Other birds seen regularly within the site are Grey Heron, Cormorant and Mallard, while low numbers of Lapwing and Teal visit during the winter. The Kingfisher, listed under Annex I of the E.U. Birds Directive, breeds along the river. A population of Freshwater Pearl Mussel is found in the river. This species is listed on Annex II of the E.U. Habitats Directive. The river also supports populations of protected fish species, notably Brook Lamprey and Salmon (Salmo salar), both of which are also listed on Annex II of the E.U. Habitats Directive.

The site also supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Badger, Irish Hare, Daubenton's Bat and Pipistrelle bat. The two bat species can be seen feeding along the river and roosting under the old bridges. Otter, another species listed on Annex II of the E.U. Habitats Directive, is also found within the site. Land use at the site consists mainly of sheep grazing in the northern section and cattle grazing on improved grasslands below Lovers Leap and further south. In the area between Milleenanannig and Bealaboy Bridge land reclamation and drainage is taking place. In the area of exposed rock on the higher terrain above Ardcahan Bridge some land reclamation and forestry is carried out. This site contains good examples of two habitats listed on Annex I of the E.U. Habitats Directive - alluvial forest and floating river vegetation - and supports populations of four Annex II species - Otter, Salmon, Brook Lamprey and Freshwater Pearl Mussel. The presence of a number of Red Data Book plant and animal species adds further interest to the site.

Appendix 2 Proposed Development

Land Registry Compliant Map



Ordnance Survey Ireland

National Mapping Agency

CENTRE COORDINATES:
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PUBLISHED:
13/02/2019

ORDER NO.:
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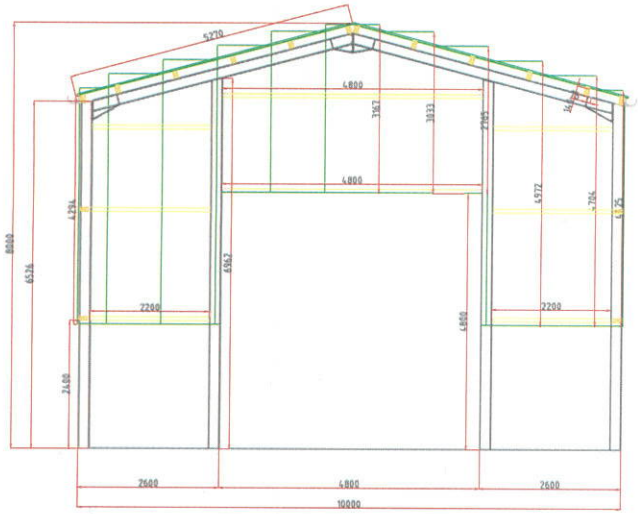
MAP SERIES:
1:5,000

MAP SHEETS:
5569

COMPILED AND PUBLISHED BY:
Ordnance Survey Ireland,
Phoenix Park,
Dublin 8,
Ireland.

LEGEND:



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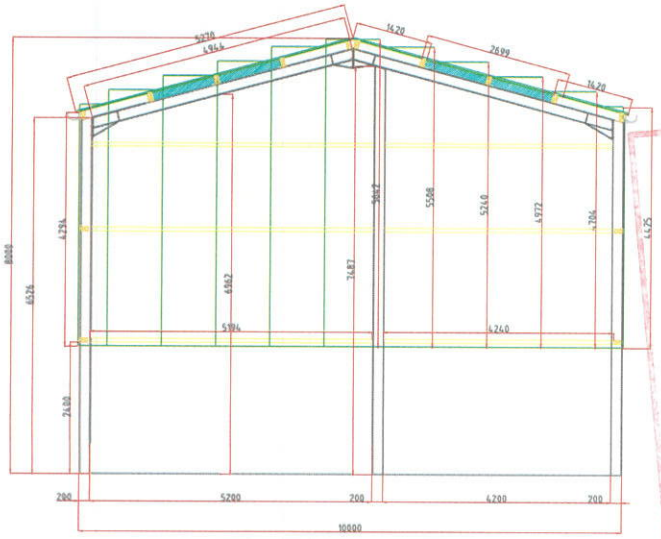

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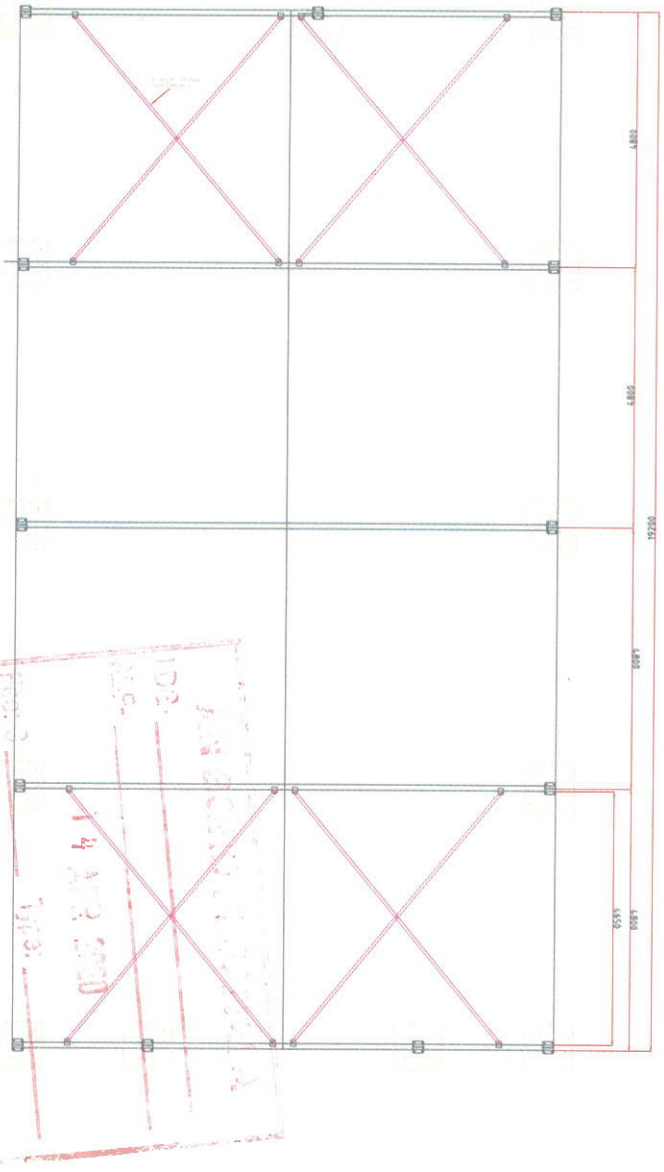

General Notes :
All steel IPE 200 Painted
10m wide x 19.2m long (4 bay). 8m ridge
1 No. Roof Light per bay
2.4m wall
Door on Front

CLONAKILTY ENGINEERING LTD

Reference :	Hurley & white - 4 Bay 19.6m L x 10m w			
Date :	07/01/2019			
Description	Quantity	MATERIAL	SIZE	Price
Purlin - roof	40	6"x3" treated Timber	4800mm	
Purlin - sides	8	6"x3" treated Timber	4650mm	
Purlin - sides	8	6"x3" treated Timber	4700mm	
Purlin - gables	3	6"x3" treated Timber	5194mm	
Purlin - gables	3	6"x3" treated Timber	4240mm	
Purlin - gables	6	6"x3" treated Timber	2200mm	
Purlin - gables	2	6"x3" treated Timber	4800mm	
Roof sheets	32	Box profile 0.6mm	5270mm	
Clear light	8	Box Profile clear light	2700mm	
Roof sheets	16	Box profile 0.6mm	1420mm	
Side Sheets	40	Box profile 0.6mm	4294mm	
Gable sheets	1	Box profile 0.6mm	5642mm	
Gable sheets	2	Box profile 0.6mm	5508mm	
Gable sheets	2	Box profile 0.6mm	5240mm	
Gable sheets	4	Box profile 0.6mm	4972mm	
Gable sheets	4	Box profile 0.6mm	4704mm	
Gable sheets	2	Box profile 0.6mm	4425mm	
Gable sheets	1	Box profile 0.6mm	3167mm	
Gable sheets	2	Box profile 0.6mm	3033mm	
Gable sheets	2	Box profile 0.6mm	2765mm	
Gutters	2	Hunter Hi Flow inc all brackets joiners etc	20.0m	
Nuts and bolts	56	M16 x 100 concrete anchors		
Nuts and bolts	224	m12 x 100 cup head bolts inc nuts and washers		
Nuts and bolts	176	m16 x 50 hex bolts inc nuts and washers		

Rev No	Drn By	Description	Date

Clonakilty Engineering Ltd
General Engineering Contractors
Lauragh Industrial Estate
Bandon
Co. Cork
P72 Y729
Tel: 023 8892511
Email: clonaeng@gmail.com
www.clonakiltyengineering.ie

Drn By	James Lucey
Date	07/01/2019
Scale	N.T.S

Description: Declan White 10m x 4bays

Dwg No: 00 01

Description:
Digital Cartographic Model (DCM)

Publisher / Source:
Ordnance Survey Ireland (OSi)

Data Source / Reference:
PRIME2

File Format:
Autodesk AutoCAD (DWG_R2013)

File Name:
v_50661175_1.dwg

Clip Extent / Area of Interest (AOI):
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LRX,LRY= 518941.7815,556288.615
ULX,ULY= 518111.7815,556903.615
URX,URY= 518941.7815,556903.615

Projection / Spatial Reference:
Projection= IRENET95_Irish_Transverse_Mercator

Centre Point Coordinates:
X,Y= 518526.7815,556596.115

Reference Index:
Map Series | Map Sheets
1:5,000 | 6569

Data Extraction Date:
Date= 07-May-2019

Source Data Release:
DCLMS Release V1.116.105

Product Version:
Version= 1.3

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Drawn By: Chris Quill, BSc (Hons), ACABE OCFPM Ltd.	Scale: 1:2500	Date: 19/08/2019	Project: Proposed Agricultural Shed to the lands located in Derrynacaheragh.
Drawing No.: DW - 2006 - 03	ISSUE: -	Client: Declan White	Title: Site Location Map

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Unit 19, Charleville Town Centre,
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Web Site: www.OCFPM.com

Description:
Digital Cartographic Model (DCM)

Publisher / Source:
Ordnance Survey Ireland (OSI)

Data Source / Reference:
PRIME2

File Format:
Autodesk AutoCAD (DWG_R2013)

File Name:
v_50661175_1.dwg

Clip Extent / Area of Interest (AOI):
LLX,LLY= 518111.7815,556288.615
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Drawn By:
Chris Quill, BSc (Hons), ACABE
OCFPM Ltd.

Scale: 1:10560

Date: 19/08/2019

Project:
Proposed Agricultural Shed to the lands located in Derrynacaheragh.

Drawing No.: DW - 2006 - 04

ISSUE: -

Client:
Declan White

Title:
Rural PLace Map

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$$\frac{0.5}{5} \times 100$$