

# Construction of a Proposed Pig Fattening House and Associated Feed Mixing Room and Pig Walkway

**Annakisha Pig Farm  
Annakisha North, Doneraile, Co. Cork**

Stage I: Screening for Appropriate Assessment  
Stage II: Natura Impact Statement

REVISED AND UPDATED IN APRIL 2015  
IN RESPONSE TO A REQUEST FOR CLARIFICATION IN  
CONNECTION WITH PLANNING REG NO. 14/05815, ISSUED  
BY CORK COUNTY COUNCIL (27 JANUARY 2015)

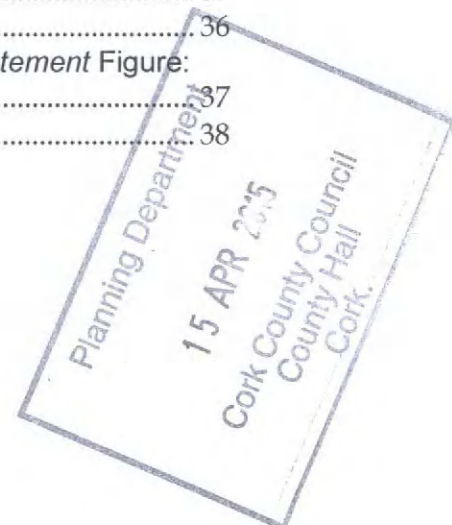
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## 1. INTRODUCTION

### 1.1. Background

This report comprises a Stage I Screening for Appropriate Assessment and Stage II Natura Impact Statement (NIS). It provides the information required to allow Cork County Council (the 'Competent Authority') to undertake Appropriate Assessment (AA) of the potential effects of the proposed construction of a pig fattening house and associated feed mixing room and pig walkway at an existing pig farm at Annakisha North, Doneraile, Co. Cork. The assessment takes into account both the pig unit site itself and the lands on which it is proposed to spread the pig manure (the 'spread lands').

Matthew Hague CEnv MCIEEM, an ecological and environmental consultant with over 13 years of relevant consultancy experience, was commissioned to prepare the Screening for Appropriate Assessment and Natura Impact Statement.

The purpose of the report is to determine the effects, if any, of the proposed development and associated features on Natura 2000 sites, also known as European Sites (candidate Special Area of Conservation (cSAC) and Special Protection Area (SPA), designated for nature conservation), and to assess if there is the potential for significant effects on the qualifying interests or on the conservation objectives of these sites.

In the preparation of this report a desk study review and field visits were undertaken and the potential impacts on the Natura 2000 sites as well as on other ecological receptors, both as a result of the proposed development and in-combination with other developments in the area, are assessed in this report. A number of additional reports have also been prepared, including the following:

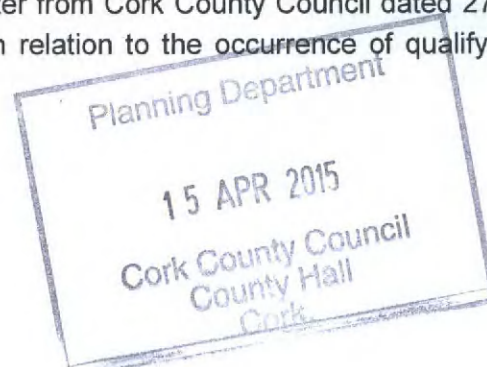
Submitted with the original planning application:

- o *Environmental Impact Statement: Proposed Construction of Pig Fattening House and Associated Feed Mixing Room and Pig Walkway at Annakisha Pig Farm, Annakisha North, Doneraile, Co. Cork.* Curtin Agricultural Consultants Ltd (August 2014);

Submitted in response to a Request For Clarification in connection with Planning Reg. No. 14/05815, issued by Cork County Council (letter dated 27 January 2015):

- o *Draft Sediment and Water Pollution Control Method Statement having regard to CIRIA Guideline C648 Control of Water Pollution from Linear Construction Sites,* Curtin Agricultural Consultants Ltd (April 2015);
- o *Further Information Report: Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm,* Curtin Agricultural Consultants Ltd (April 2015).

In response to **Point 1, bullet point 1**, of the letter from Cork County Council dated 27 January 2015, an assessment of the River Blackwater cSAC in relation to the occurrence of qualifying features for



which the cSAC has been designated within receiving waters proximal to or downstream of the site has been made. See Section 3.2.1 and Appendix IV of this report for details.

In response to **Point 1, bullet point 2**, of the letter from Cork County Council dated 27 January 2015, measures to be implemented to avoid impacts on site at the construction phase of the development have been addressed. See Section 4.5 and Figure 3 of this report and the accompanying *Draft Sediment and Water Pollution Control Plan*.

In response to **Point 1, bullet point 3**, of the letter from Cork County Council dated 27 January 2015, information relating to the proposed management of additional slurry (use of spread lands) during the operational phase is presented throughout this report and within the accompanying Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*.

In response to **Point 1, bullet points 4 and 5**, of the letter from Cork County Council dated 27 January 2015, information relating to the potential for the development to give rise to adverse effects on the integrity of the cSAC or to interfere with the achievement of the conservation objectives which apply to the cSAC is presented in Section 4.2.

In response to **Point 1, bullet point 6**, of the letter from Cork County Council dated 27 January 2015, an assessment of likely impacts having regard to other activities within the catchment has been made. See Sections 3.4 and 4.6 of this report for details.

In response to **Point 2** of the letter from Cork County Council dated 27 January 2015, reference should be made to Section 4.5 and Figure 3 of this report and the accompanying *Draft Sediment and Water Pollution Control Plan*.

In response to **Point 3** of the letter from Cork County Council dated 27 January 2015, reference should be made to the accompanying Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*.

## 1.2. Figures and appendices

The requirements for an Appropriate Assessment are set out under Article 6 of the EU Habitats Directive (92/34/EEC), transposed into Irish law through *The European Communities (Birds and Natural Habitats) Regulations 2011* (SI No. 477 of 2011). An outline of the AA process is presented in **Appendix I**. **Appendix II** provides information on the relevant designated sites and **Appendix III** comprises the code of practice for land spreading of pig manure (Part 4 of SI No. 31 of 2014).

**Figure 1** of this report shows the site location in relation to relevant Natura 2000 sites and **Figure 2** shows the location of the proposed spread lands in relation to relevant Natura 2000 sites. **Figure 3** shows the site layout, including water protection measures. Additional Figures, extracted from the NPWS Conservation Objectives document, are also presented, in **Appendix IV**. Reference should also be made to **Figures 1-4** of the Further Information Report: *Pig Manure Land Spreading Impact*

Assessment of Proposed Development at Annakisha Pig Farm, Curtin Agricultural Consultants Ltd (April 2015).

## 2. METHODOLOGY

This report takes the following guidance documents into account:

- *Appropriate Assessment of Plans and Projects in Ireland – Guidance for Planning Authorities* (Department of Environment, Heritage and Local Government, 2010 revision);
- *Appropriate Assessment under Article 6 of the Habitats Directive: Guidance for Planning Authorities*. Circular NPWS 1/10 & PSSP 2/10;
- *Assessment of Plans and Projects Significantly Affecting European sites: Methodological Guidance on the Provisions of Article 6(3) and (4) of the Habitats Directive 92/43/EEC* (European Commission Environment Directorate-General, 2001).

### 2.1. Desk study

A desk-based assessment was undertaken of the area surrounding the proposed development at Annakisha, focusing on habitats and species that are listed as qualifying interests in the designation of the Natura 2000 sites. A search was carried out for all Natura 2000 sites within 15km of the site, (and further afield, if potentially connected to the proposed development site by a pathway), in accordance with the *Appropriate Assessment Guidance for Planning Authorities*.

Information was collated from the organisations and websites listed below:

- Information on land-use zoning from the online mapping of the Department of the Environment, Community and Local Government (<http://www.myplan.ie/en/index.html>);
- Recent OSi mapping and aerial photography;
- Photographs taken at the site;
- Online data available on European sites as held by the National Parks and Wildlife Service (NPWS) ([www.npws.ie](http://www.npws.ie));
- South West River Basin District Management Plan 2009 – 2015);
- Information on water quality in the area available ([www.epa.ie](http://www.epa.ie));
- Information on the South West River Basin District ([www.wfdireland.ie](http://www.wfdireland.ie));
- Information on soils, geology and hydrogeology in the area ([www.gsi.ie](http://www.gsi.ie));
- Information on the status of EU protected habitats in Ireland (NPWS, 2013);
- National Biodiversity Plan 2011 – 2016 (Department of Arts, Heritage and the Gaeltacht, 2011);
- Cork County Development Plan 2014;
- County Cork Biodiversity Action Plan 2009 – 2014;
- South Western Regional Planning Guidelines (2010 – 2022);
- Food Harvest 2020 Environmental Analysis Report (Philip Farrelly & Co), January 2014.

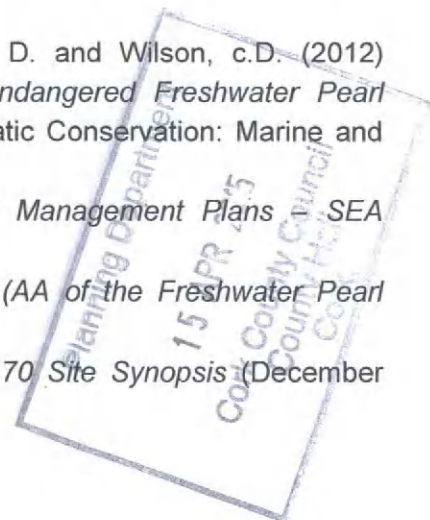


The report has regard to the following legislative instruments:

- European Communities Environmental Objectives (Freshwater Pearl Mussel) Regulations, 2009 (SI No. 296 of 2009);
- European Union (Good Agricultural Practice for Protection of Waters) Regulations 2014 (SI No. 31 of 2014);
- European Commission (EC) Habitats Directive 92/43/EEC;
- European Commission (EC) Birds Directive 2009/147/EC;
- European Communities (Birds and Natural Habitats) Regulations 2011 (SI no 477 of 2011).

In addition, the following information was reviewed:

- Byrne, A., Moorkens, E.A., Anderson, R., Killeen, I.J. and Regan, E.C. (2009) *Ireland Red List No. 2 – Non-Marine Molluscs*. NPWS;
- Moorkens E.A. (1999) *Conservation Management of the Freshwater Pearl Mussel (Margaritifera margaritifera) Part 1, Biology of the Species and its Present Situation in Ireland*. Irish Wildlife Manuals No. 8, NPWS;
- Moorkens E.A. (2000) *Conservation Management of the Freshwater Pearl Mussel (Margaritifera margaritifera) Part 2, Water Quality Requirements*. Irish Wildlife Manuals No. 9, NPWS;
- King J.J. and Linnane S.M. (2004) *The Status and Distribution of Lamprey and Shad in the Slaney and Munster Blackwater SACs*; Irish Wildlife Manuals No. 14, NPWS;
- NPWS (2012) *Conservation Objectives: Blackwater River (Cork/Waterford) SAC 002170*. Version 1.0 (31 July 2012);
- NPWS (2012) *Blackwater River (Cork/Waterford) SAC 002170 Conservation Objectives Supporting Document: Marine Habitats* (January 2012);
- NPWS (2012) *Blackwater River (Cork/Waterford) SAC 002170 Conservation Objectives Supporting Document: Coastal Habitats* (February 2012);
- NPWS (2012) *Blackwater River (Cork/Waterford) SAC 002170 Conservation Objectives Supporting Document: Woodland Habitats* (July 2012);
- Natura 2000 Standard Data Form (*Blackwater River Cork/Waterford cSAC*), NPWS (September, 2014);
- Reid, N., Keys A., Preston, J.S., Moorkens, E., Roberts, D. and Wilson, c.D. (2012) *Conservation Status and Reproduction of the Critically Endangered Freshwater Pearl Mussel (Margaritifera margaritifera) in Northern Ireland*. Aquatic Conservation: Marine and Freshwater Ecosystems (November 2012).
- RPS (2009) *SEA for Freshwater Pearl Mussel Sub-Basin Management Plans – SEA Scoping Document* (November 2009);
- RPS (2010) *Appropriate Assessment of Natura 2000 sites (AA of the Freshwater Pearl Mussel Sub-Basin Plans)* (May 2010);
- NPWS (2013) *Blackwater River (Cork/Waterford) SAC 002170 Site Synopsis* (December 2013);



- o North South 2 Project (2010) *Freshwater Pearl Mussel Munster Blackwater Sub-Basin Management Plan*, (Second Draft, March 2010).

Conservation Objectives for all of the Natura 2000 sites have been provided by NPWS and these have been reviewed as part of this study (see **Appendix II**). In addition, records of key species, held by the National Biodiversity Data Centre (NBDC) and Bat Conservation Ireland (BCI), were analysed.

## 2.2. Field visits

A field visit was undertaken on 3<sup>rd</sup> November 2014, to assess the overall ecological value of the site, with particular reference to any European protected habitats and species.

A further site visit and windshield survey was undertaken on 8<sup>th</sup> April 2015, to visually assess the proposed spread lands.

Given the amount of information available, including from NPWS and other sources, it has been possible to gather adequate information on the site and the adjacent area (in particular, the Natura 2000 sites), in order to make an informed, sound judgement as to the potential impacts of the proposed development on the qualifying interests of Natura 2000 sites.

## 2.3. Assessment of impact significance

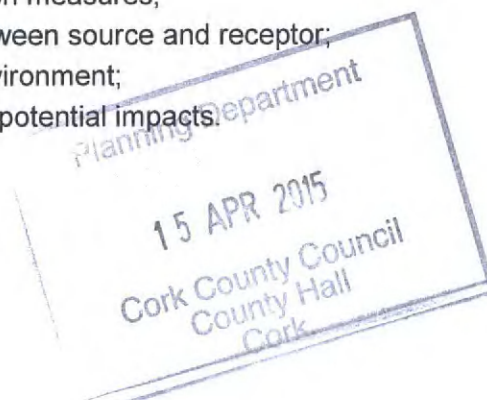
In ecological and environmental impact assessment, for the risk of an impact to occur there must be a 'source', such as a construction site; a 'receptor', such as a designated site for nature conservation; and a pathway between the source and the receptor, such as a watercourse that links the construction site to the designated site. Although there may be a risk of an impact it may not necessarily occur, and if it does occur, it may not be significant.

Potential impacts on qualifying habitats, species and conservation objectives may result from:

- o Habitat loss and/or fragmentation;
- o Impacts to habitat structure;
- o Disturbance to species of conservation concern;
- o Impacts on water quality;
- o Air pollution;
- o Noise pollution;
- o Mortality to species (such as roadkill).

In addition, the significance of the potential impacts depends on:

- o Effectiveness of mitigation measures;
- o Distance of pathway between source and receptor;
- o Character of existing environment;
- o Tolerance of receptor to potential impacts.



Under the *Birds and Habitats Regulations*, 2011, the first test that has to be considered is whether the proposed development, either alone or in combination with other relevant projects and plans, would be likely to have a significant effect. Effects are judged to be significant where they affect the integrity of the site with respect to the conservation objectives of the features for which the site was designated/classified.

The purpose of Stage 1 is twofold:

- To screen out those aspects of the proposal that can be considered not likely to have a significant effect, and
- To screen out the key qualifying features of the designation that are not likely to be significantly affected by the proposal.

In order to undertake an appropriate screening, the guidance produced by the Department of the Environment, Heritage and Local Government (DoEHLG) in 2010 (revised) has been followed in order to:

- Characterise the potential impacts to the qualifying interests of any Natura 2000 site or sites that may result from the proposed development;
- Assess the likely significance of potential impacts on the qualifying interests of any Natura 2000 site or sites within the potential zone of influence of the proposed development; and
- Assess the risk of an adverse effect on the integrity of the site or occurring to a qualifying interest feature for which the site is of European interest.

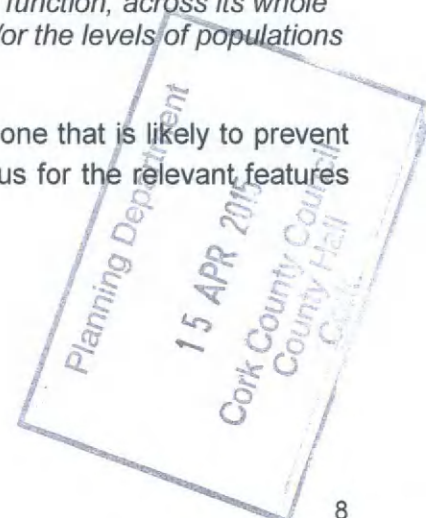
Where it cannot be concluded with confidence that effects are unlikely, under the precautionary principle, further detailed consideration is required to assess the potential impact of the project on the integrity of the relevant Natura 2000 site(s) in question. Where uncertainty or doubt remains, an adverse effect should be assumed.

#### **2.4. Ascertaining the Threat to Site Integrity**

The Competent Authority (Cork County Council) will be required to determine whether the proposed development would adversely affect the integrity of any Natura 2000 site, or sites, in light of the conservation objectives for that particular site or sites. The integrity of a site is defined as:

*“The integrity of a site is the coherence of its ecological structure and function, across its whole area, which enables it to sustain the habitat, complex of habitats and/or the levels of populations of the species for which it was designated/classified.”*

Further to the above, an adverse effect on integrity can also be defined as one that is likely to prevent the site from making the same contribution to favourable conservation status for the relevant features as it did at the time of its classification/designation.





### 3. STAGE I: SCREENING FOR APPROPRIATE ASSESSMENT

#### 3.1. The proposed development

The existing pig farm located in Annakisha North, Doneraile, Co. Cork is an EPA licensed installation (Integrated Pollution Prevention and Control (IPPC) registered number P0446-01). The proposed development consists of a purpose built pig fattening house, with an associated feed mixing room and a pig walk way. The new structures will be built on an agricultural field to the north of the existing farm buildings.

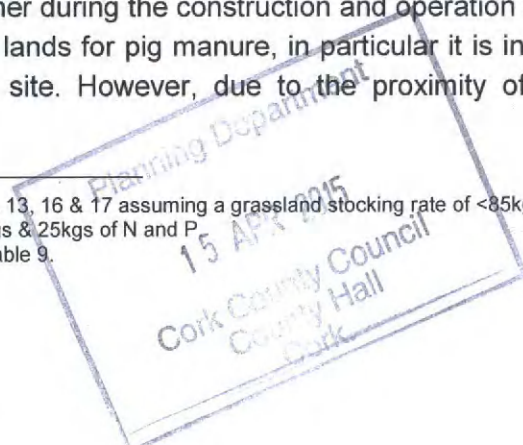
As a result of the proposed development, total pig numbers on the farm are expected to increase by approximately 37%, from 7,462 to 10,214 (all categories combined). Slurry production on the farm is expected to increase by approximately 3,000m<sup>3</sup> (33%). As is currently the case, organic manure (pig slurry, including water used in power washing) arising from the pig farm will continue to be applied to fields in a manner consistent with the existing codes of practice for slurry spreading and in accordance with SI 31 of 2014.

As shown in **Figure 2** and as described in the accompanying Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm* the spread lands are located within a maximum distance of 7km from the pig farm, and lie between the Rivers Awbeg and Blackwater, to the east of Mallow. This area is in intensive agricultural use, with substantial areas dominated by tillage and grass production, and currently receive significant nutrient inputs, in the form of chemical fertiliser and organic manures. The pig manure arising from the pig farm will in all cases be used to replace chemical fertiliser. There will therefore be no overall increase in fertiliser loading on the spread lands.

The existing annual fertiliser requirement for the spread lands is conservatively estimated to be approximately 290,000kgs of chemical N and 43,000kgs of chemical P<sup>1</sup>. Without the availability of pig manure this requirement will be filled with chemical fertiliser. Making pig manure available to farmers in the study area at a competitive price area will allow farmers to replace the chemical fertiliser. Farmers are required by SI 31 of 2014, Article 16 (1) to apply fertilisers (whether organic or chemical) in a manner that minimises or prevents the application of pig manure fertiliser in excess of crop requirements in order to prevent enrichment of soils. The proposed development will supply 60,000 kgs of N and 9,600 kgs of P<sup>2</sup> per annum in 12,000 m<sup>3</sup> of pig manure - which has to be used to replace chemical fertiliser. This will replace approximately 20% of chemical fertiliser requirement within the pig manure spreading study area.

The proposed development is being designed in such a way as to ensure that no significant ecological impacts occur, either during the construction and operation of the proposed pig unit, or as a result of the use of the spread lands for pig manure, in particular it is intended to avoid any impacts whatsoever on any Natura 2000 site. However, due to the proximity of the River Blackwater cSAC, it has been

<sup>1</sup> Si 31 of 2014, Table 12, 13, 16 & 17 assuming a grassland stocking rate of <85kgs / ha – 2,258ha of grass @ 85kgs & 11kgs of N and P; and 723ha of arable @ 135kgs & 25kgs of N and P  
<sup>2</sup> As per Si 31 of 2014, Table 9.



determined that the project should be subject to Screening for Appropriate Assessment under Article 6(3) of the EU Habitats Directive.

### 3.2. Ecological Overview

#### 3.2.1. Relevant Natura 2000 sites

Four Natura 2000 sites could potentially be affected by the proposals, as follows:

##### Candidate Special Areas of Conservation:

1. **Blackwater River cSAC (Cork/Waterford) (002170) 1.5km south (North Caherduggan/Carrig River – a tributary of the River Blackwater);**
2. Ballyhoura Mountains cSAC (002036) 15km north;
3. Carrigeenamronety Hill cSAC (002037) 15km north;

##### Special Protection Area:

4. Kilcolman Bog SPA (004095) 7.3km north.

Conservation Statements have been prepared for Ballyhoura Mountains cSAC and Carrigeenamronety Hill cSAC only, however a detailed Conservation Objectives document, dated July 2012 has been prepared for the Blackwater River cSAC. Only the Blackwater River cSAC (in bold in the list above) is potentially linked to either the proposed development site or the spread lands.

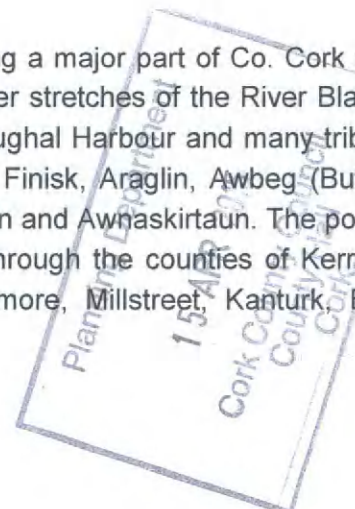
The pathway from the proposed development site is via water, with an unnamed stream, a tributary of the River Blackwater, present within 50m of the proposed site area, to the north. This stream flows through farmland to the west and through mixed deciduous woodland to the east and south of the Annakisha site.

The pathway from the proposed spread lands is also via water, with minor streams and drainage channels that form tributaries of either the Awbeg River or the River Blackwater present throughout the area.

It is considered that no other Natura 2000 sites have any connection (pathway) to the proposed development at Annakisha due to their locations and the features (qualifying interests) for which they are designated. These sites are not considered further in this report.

#### 3.2.2. Blackwater River cSAC (Cork/Waterford) (002170)

The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. The designated site consists of the freshwater stretches of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries, the larger of which include the Licky, Bride, Flesk, Chimneyfield, Finisk, Araglin, Awbeg (Buttevant), Clyda, Glen, Allow, Dalua, Brogeen, Rathcool, Finnow, Owentaraglin and Awmaskirtaun. The portions of the Blackwater and its tributaries that fall within this cSAC flow through the counties of Kerry, Cork, Limerick, Tipperary and Waterford. Nearby towns include Rathmore, Millstreet, Kanturk, Banteer,



Mallow, Buttevant, Doneraile, Castletownroche, Fermoy, Ballyduff, Rathcormac, Tallow, Lismore, Cappoquin and Youghal.

The Conservation Objectives of the designation are to restore the favourable conservation condition of a total of seven species (the freshwater pearl mussel, white-clawed crayfish, sea lamprey, brook lamprey, river lamprey, twaite shad and otter and to maintain the favourable conservation condition of two additional species (the Atlantic salmon and Killarney Fern) in the Blackwater River (Cork/Waterford) SAC, as well as to maintain the favourable conservation condition of a total of six habitats (estuaries, mudflats and sandflats not covered by seawater at low tide, perennial vegetation of stony banks, Salicornia and other annuals colonising mud and sand, Mediterranean salt meadows and water courses of plain to montane levels) and to restore the favourable conservation condition of three additional habitats (Atlantic salt meadows, old sessile oak woods and alluvial forests).

Due to their location and the reasons for their designation it is not considered reasonable to include the coastal and marine habitats of the Blackwater River cSAC within the 'zone of influence' of the proposed development. However, a number of the other habitats and species have the potential to be impacted upon. These include all the species, plant and animal, for which the site is designated, and the freshwater and terrestrial habitats.

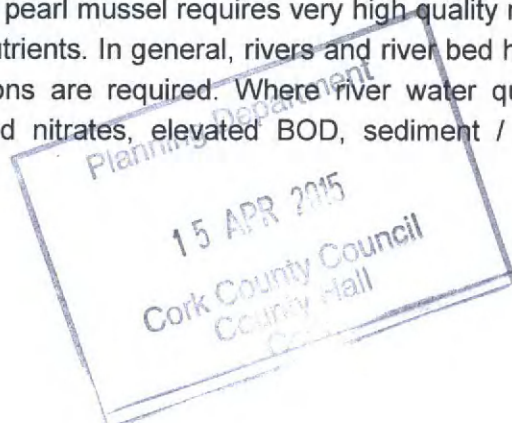
Map 8 (extracted from the NPWS Conservation Objectives Document for the Blackwater River cSAC) presented in Appendix IV shows that freshwater pearl mussel (*Margaritifera margaritifera*) is known to be present in the Awbeg and Blackwater Rivers in the vicinity and downstream of the proposed development site and spread lands.

Map 9 (extracted from the NPWS Conservation Objectives Document for the Blackwater River cSAC) presented in Appendix IV shows that white-clawed crayfish (*Austropotamobius pallipes*) is present in the Awbeg River. The species is predominantly recorded upstream of the proposed development site and spread lands.

Map 10 (extracted from the NPWS Conservation Objectives Document for the Blackwater River cSAC) presented in Appendix IV shows lamprey (sea lamprey (*Petromyzon marinus*), brook lamprey (*Lampetra planeri*) and river lamprey (*L. fluviatilis*)) are known to be present in the Awbeg and Blackwater Rivers in the vicinity and downstream of the proposed development site and spread lands.

It is considered that of all of the species and habitats present in the Blackwater River cSAC, the freshwater pearl mussel is the qualifying feature most sensitive to the potential effects of development. In particular, the species is highly susceptible to reductions in water quality caused by siltation and nutrient loading.

The freshwater pearl mussel requires very high quality rivers with clean river beds and waters with very low levels of nutrients. In general, rivers and river bed habitat needs to be at "reference" level, i.e. near natural conditions are required. Where river water quality has been depressed by inputs such as phosphates and nitrates, elevated BOD, sediment / suspended solids from construction sites, or



dangerous substances, such as metals or insecticides (particularly sheep dip), mussel numbers can rapidly decline.

The decline of pearl mussel populations in Ireland has mostly occurred from the continuous failure to produce new generations of mussels because of the loss of clean gravel beds, which have become infiltrated by fine sediment and/or over-grown by algae or macrophytes<sup>3</sup>.

A summary of the qualifying features, conservation objectives and vulnerabilities for the cSAC is presented in **Appendix II** of this report. This information is taken from the NPWS database for the site<sup>4</sup>.

There are no conservation management plans available for the River Blackwater cSAC.

### 3.2.3. Other designated conservation areas (other than Natura 2000 sites)

No non-European designated conservation sites occur within the immediate footprint of the proposed development at Annakisha. Numerous nationally important sites, proposed as Natural Heritage Areas (pNHAs), are located within the north Cork area. However only one such site (Awbeg Valley (above Doneraile) pNHA, 000075) is present anywhere near the site, approximately 5km to the north. This site is upstream of Annakisha and is part of the Blackwater River cSAC. It is therefore not considered further in this report.

### 3.2.4. Rare and protected species

The NPWS database was consulted with regard to rare species (Curtis & McGough 1988) and species protected under the Flora Protection Order (1999). There are no known records of rare or protected plant species within the immediate vicinity of the proposed development.

There are records of starved wood sedge (*Carex depauperata*), orange foxtail (*Alopecurus aequalis*), and otter (*Lutra lutra*) within the wider local area, however none of these species are known to occur at the Annakisha site, and none were observed.

### 3.2.5. Ecological sites and habitats

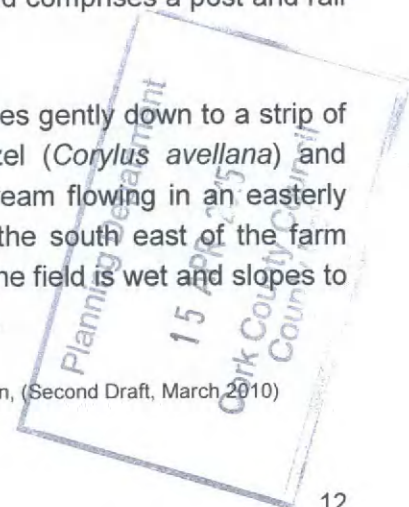
#### Habitats and species

The proposed development area comprises a single agricultural field. The field is currently at a lower level than the existing buildings (up to 3m). The northern boundary of this field comprises a post and rail fence, with a number of immature ash trees planted.

To the north of the site is a single field, currently unmanaged. This field slopes gently down to a strip of mixed deciduous woodland, dominated by ash (*Fraxinus excelsior*), hazel (*Corylus avellana*) and sycamore (*Acer pseudoplatanus*) at this location and associated with a stream flowing in an easterly direction. The stream joins the North Caherduggan River/Carrig River to the south east of the farm before entering the River Blackwater itself, close to the N72 road. Although the field is wet and slopes to the stream, no direct flow of water from the field to the stream was observed.

<sup>3</sup> North South 2 Project (2010) Freshwater Pearl Mussel Munster Blackwater Sub-Basin Management Plan, (Second Draft, March 2010)

<sup>4</sup> <http://www.npws.ie/protected-sites/sac/002170>



The site for the proposed building construction is of no ecological significance.

### **Fauna**

No features suited to bats are present on the site, however the stream is likely to be used by commuting and foraging bats. Two red squirrels were noted in a mature beech tree on the banks of the stream, approximately 200m west of the site. During the field survey no evidence of badgers was found however a possible badger sett, long-disused, was recorded in the coniferous plantation to the east of the farm. Numerous rabbits are present on the farm, and fox droppings were also noted.

A typical assemblage of farmland bird species was noted, including blackbird, rook, magpie, starling, robin and chaffinch.

### **3.3. Assessment of likely effects**

#### **Proposed development site**

No construction works will take place within the boundary of any designated site. As a result there will be no direct impacts such as loss of habitat within any such site. Furthermore, there will be no loss of any habitat or species listed as a qualifying feature of any designated site, but occurring outside its boundary. The loss of the site itself is of no ecological significance.

The construction and operation of the proposed development could potentially give rise to siltation or pollution, including organic waste that could enter watercourses and therefore the Blackwater River cSAC.

#### **Proposed spread lands**

During the ongoing operation of the pig farm, pig manure will continue to be spread on fields offsite, under licence and in accordance with water quality legislation, as is currently the case. No such spreading will take place within the boundary of the Blackwater River cSAC. Details of the spread lands, including land utilisation, land vulnerability and aquifer type are presented in the accompanying Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*. The existing study area comprises of 3,390ha, 88% of which is agricultural land.

As previously stated, the additional slurry arising on the pig farm will be spread on fields in the surrounding area, and an equivalent reduction in the amount of chemical fertiliser spread on the land will apply. There will therefore be no increase in the total annual nutrient input onto the spread lands. Nevertheless, such practices could, potentially, result in the contamination of nearby watercourses, if the spreading requirements, as specified in SI 31 of 2014 are not adhered to.

Although the risk of a pollution event occurring of a magnitude that would result in significant adverse effects on the Natura 2000 sites is very low, this element of the proposed development does have the potential to result in adverse effects on water quality in the River Blackwater cSAC.



### 3.4. In combination effects

It is a requirement of the *Birds and Natural Habitats Regulations*, 2011 that when considering whether a plan or project will adversely affect the integrity of a European site the assessment must take into account in-combination effects with other current or reasonably foreseeable plans and projects.

- If it can be clearly demonstrated that the plan or project will not result in any effects at all that are relevant to the integrity of a European site then the plan or project should proceed without considering the in-combination test, further;
- If there are identified effects arising from the plan or project even if they are perceived as minor and not likely to have a significant effect on the integrity of a European site alone, then these effects must be considered 'in-combination' with the effects arising from other plans and projects.

According to the EPA database there are no other licensable intensive agricultural enterprises within the study area. The nearest significant pig farm (PO387-01) is located in Loghquinn, Castletownroche which is 5.8km north east of the Annakisha Pig Unit and 0.5km south of the study area. There are two other licensable intensive agricultural facilities located 8.8km (PO315-01) and 11km (PO896-01) south east of the study area. There is a chicken house located in Inchakevin. The land utilisation is shown in Figure 2 of the Further Information Report: *Pig Manure Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*.

### 3.5. Summary of potential impacts

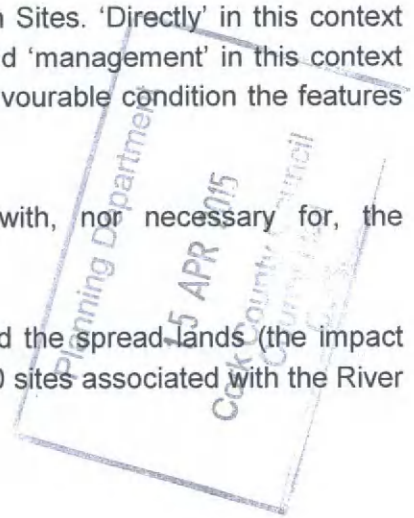
1. During the **construction** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;
2. During the **operational** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;
3. During the **operational** phase there is a risk of contamination of watercourses resulting from the spreading of slurry, potentially resulting in impacts on the Blackwater River cSAC.

### 3.6. Screening conclusion

The first part of the screening process requires consideration of the project in respect of whether it is directly connected with or necessary for the management of European Sites. 'Directly' in this context means solely conceived for the conservation management of a site and 'management' in this context refers to the management measures required in order to maintain in favourable condition the features for which the European Site has been designated.

- The proposed development is neither directly connected with, nor necessary for, the management of any Natura 2000 sites.

It is considered that both the proposed development at Annakisha and the spread lands (the impact 'source') are potentially linked, via the water 'pathway', with Natura 2000 sites associated with the River Blackwater (the 'receptors').



The Blackwater River cSAC is in close proximity to the proposed development. For the reasons outlined in Sections 3.3 and 3.5 it has been concluded that the proposed development should be subject to Appropriate Assessment under Article 6(3) of the EU Habitats Directive (Stage II Appropriate Assessment).

Planning Department  
15 APR 2015  
Cork County Council  
County Hall  
Cork

## 4. STAGE II: NATURA IMPACT STATEMENT

### 4.1. Introduction

From the Stage I Appropriate Assessment Screening report it is concluded that the proposed development has the potential to impact on the Blackwater River cSAC as follows:

1. During the **construction** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;
2. During the **operational** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;
3. During the **operational** phase there is a risk of contamination of watercourses resulting from the spreading of slurry, potentially resulting in impacts on the Blackwater River cSAC.

### 4.2. Description of the designated sites

The Blackwater River cSAC is selected for a number of protected species, including the freshwater pearl mussel, white-clawed crayfish and a number of freshwater fish. It is of importance for its diverse habitats, ranging from old sessile oak woodlands and alluvial forests to its watercourses and coastal salt meadows.

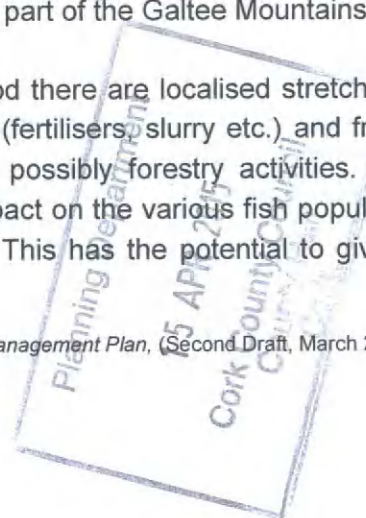
Relevant details of the Qualifying Features, Vulnerability and Conservation Objectives of the cSAC and SPA are presented in Appendix II.

Based on the information provided by the developer, and for the reasons outlined in Section 3 of this report, it is considered that the freshwater pearl mussel is the receptor (qualifying feature) that is at risk from the development and operation, including land spreading of slurry, of the pig farm at Annakisha.

The Munster Blackwater catchment is the largest pearl mussel catchment in Ireland, encompassing 2,333.83km<sup>2</sup>, in the South Western River Basin District. The Blackwater rises in the Mullaghareirk Mountains in County Kerry and then flows in an easterly direction through Mallow and Fermoy. It then enters County Waterford where it flows through Lismore before abruptly turning south at Cappoquin and finally draining into the sea at Youghal Harbour. In total, the Blackwater is 120km long. It is notable for being one of the best Salmon fishing rivers in the country. The entire length of the catchment forms part of the Blackwater River (Cork/Waterford) SAC it also incorporates part of the Galtee Mountains SAC<sup>5</sup>.

While water quality in the Blackwater River system is mostly good there are localised stretches which have been polluted. Pollution is derived from agricultural run-off (fertilisers, slurry etc.) and from point sources mainly in towns along the rivers, and in some areas possibly forestry activities. Pollution remains a threat to water quality and poor water quality could impact on the various fish populations as well as the freshwater pearl mussel and white-clawed crayfish. This has the potential to give rise to

<sup>5</sup> North South 2 Project (2010) *Freshwater Pearl Mussel Munster Blackwater Sub-Basin Management Plan*, (Second Draft, March 2010).





adverse effects on the integrity of the cSAC, by impacting on the habitats and species for which it is designated. Riverbank protection works to prevent erosion and fisheries related developments have recently occurred in parts of the Blackwater and some involve interference with the riverbed – such works could affect freshwater pearl mussel populations. Most of the remaining woodlands have a significant amount of non-native species, including conifers and the invasive *Rhododendron ponticum*. If not controlled, the value of the woods will decrease further with time<sup>6</sup>.

Agricultural practices that contribute to increases in nutrients or silt in a river can interfere with the achievement of the conservation objectives of the cSAC. They can prevent the favourable conservation condition of the habitats and species from being maintained, or restored. This is particularly true in the case of freshwater pearl mussel populations. The intensification of agriculture in Ireland has led to cumulative effects that have had very severe consequences for pearl mussel reproductive success<sup>7</sup>. In particular, siltation has been assessed as the main cause of juvenile mortality in freshwater pearl mussel populations, contributing to a lack of recruitment<sup>8</sup>.

#### 4.3. Description of the project

The overall project is described in Section 3.1 of this report and full details of the proposed development are presented in the documentation accompanying the planning application, including the EIS and architect's drawings. It is proposed to construct a new pig fattening house and associated feed mixing room and pig walkway on the site of an existing pig farm. The resulting development will result in an increase in pig numbers on the farm of approximately 37%, and a related increase in the production of pig slurry in the order of 33%.

As previously stated, the proposed spread lands are in agricultural use, with substantial areas dominated by tillage and grass production, and currently receive significant nutrient inputs, in the form of chemical fertiliser and organic manures. The additional slurry arising from the pig farm will in all cases be used to replace chemical fertiliser. There will therefore be no overall increase in fertiliser loading on the spread lands. Further details of this are provided in the Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*.

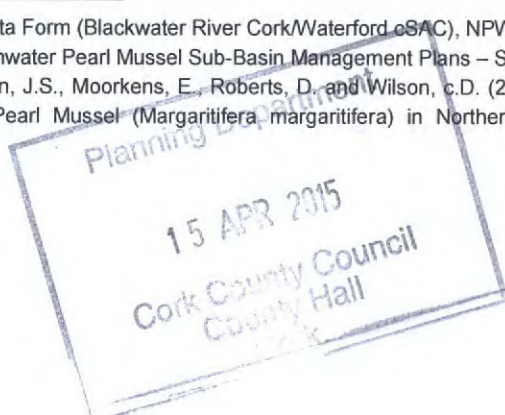
#### 4.4. Potential impacts on the integrity of designated sites

It is not proposed to undertake any works, during either construction or operation, within any designated site. Furthermore, no evidence of any of the species or habitats for which the Blackwater River cSAC is designated was found either within or in the immediate vicinity of the footprint of the proposed development. The proposed development will result in the removal of a heavily disturbed field. These works will not result in the loss of any habitats of ecological value and the finished construction will have no impacts on the River Blackwater.

<sup>6</sup> Natura 2000 Standard Data Form (Blackwater River Cork/Waterford cSAC), NPWS (September, 2014);

<sup>7</sup> RPS (2009) SEA for Freshwater Pearl Mussel Sub-Basin Management Plans – SEA Scoping Document (November 2009);

<sup>8</sup> Reid, N., Keys A., Preston, J.S., Moorkens, E., Roberts, D. and Wilson, C.D. (2013) Conservation Status and Reproduction of the Critically Endangered Freshwater Pearl Mussel (*Margaritifera margaritifera*) in Northern Ireland. Aquatic Conservation: Marine and Freshwater Ecosystems.



Pig manure arising from the proposed development will not be spread either within the boundary of the Blackwater River cSAC or within 5m of watercourses, in accordance with SI No. 31 of 2014. The pig manure will be spread on land that is intensively farmed and will serve to replace a significant proportion (up to 20%<sup>9</sup>) of the chemical fertilizer that is currently spread on the land.

In the event that contaminated water should enter any watercourse during the construction or operation of the proposed development at Annakisha pig farm, including on the lands used for pig slurry spreading, there is the potential for negative impacts on the integrity of the Blackwater River cSAC. Such contamination could include silt, foul water, hydrocarbons, or other pollutants. In particular, the freshwater pearl mussel, of which an important population is known to occur within the zone of influence of the proposed development, is highly sensitive to impacts on water quality, via nutrient increases or siltation.

#### 4.5. Impact mitigation

A draft *Sediment and Water Pollution Control Method Statement* has been prepared that addresses the concerns raised by Cork County Council in its letter dated 27 January 2015.

**In this section, reference is made to Section J of a letter dated 16/10/2014, from Cork County Council, to Mr Michael Monagle, care of Mr Con Curtin, Agricultural Consultant.**

1. During the **construction** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;

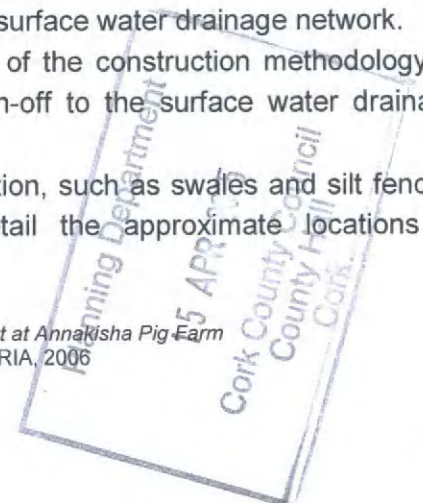
In response to **Section J(1)** of the letter from Cork County Council, A construction method statement will be put in place by the contractor. The method statement will have adequate regard to appropriate guidelines relating to the control of water pollution from construction sites, including CIRIA Guideline C648<sup>10</sup>.

The following elements will be included in the contractor's method statement, and further information is presented in the Draft *Sediment and Water Pollution Control Method Statement* and in Figure 3:

- In order to ensure there are no construction impacts, either on Natura 2000 sites or on water quality in general, all hazardous substances, such as fuels, oils, cement and concrete products, will be delivered on-site by leak-proof containers or will be stored on-site in secure areas remote from drainage connections to the existing surface water drainage network.
- The contractor will take adequate precautions as part of the construction methodology to avoid any pollution from construction activities via run-off to the surface water drainage network.
- The method statement will include details of silt protection, such as swales and silt fences, and include a drawing, showing in necessary detail the approximate locations of

<sup>9</sup> Section 5.2.d of *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm*

<sup>10</sup> *Control of water pollution from linear construction projects. Technical Guidance (C648). CIRIA, 2006*



watercourse buffers, bunded areas and areas for stockpiling of materials. See Figure 3. It should be noted that it is unlikely that any materials will be stored on site for long periods.

- Concrete will be delivered ready mixed as required and used immediately.
- All surface water arising during construction will be directed to temporary settlement areas (swales), to allow for any sediment to settle and be removed prior to the surface water discharging.
- In relation to risks related to potential contamination of surface waters reference is made in Table 1 to Section 5.3 of the EIS, which deals with mitigation measures for maintaining water quality at the site during construction, and the Draft *Sediment and Water Pollution Control Plan*;

### **5.3 Mitigation Measures for maintaining water quality on the pig farm**

During the construction phase;

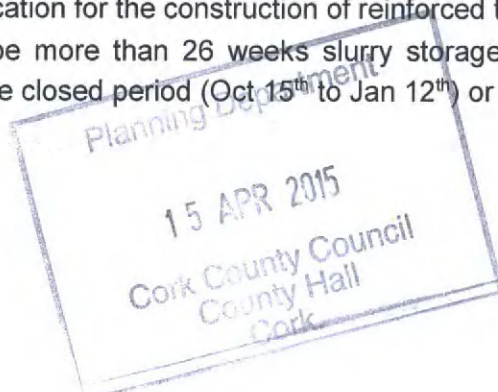
- The contractor will operate to approved industry standards to insure water quality is not adversely affected. To insure that contamination will not occur;
  - Where possible construction vehicles will be filled with fuel oil off-site;
  - If water has to be pumped from the construction site it will be passed through a swale / filtration system before discharged to the surface water;
  - Wheels of construction machinery will be washed to prevent clay being deposited on the public road. The wheel wash water will be stored in slatted tanks;
  - The excavated soil will be graded gently at the northern side of the in-fill area and will be compacted and reseeded immediately. The maximum gradient for the screening embankment will be a maximum 1 : 2 slope. The soil will not be deposited within 20m of the stream at the northern boundary of the site to allow a buffer near the stream.

**Table 1:** Extract from EIS Section 5.3

2. During the **operational** phase there is a risk of pollution and siltation entering the nearby watercourse, potentially resulting in impacts on the Blackwater River cSAC;

In response to **Section J(2)** of the letter from Cork County Council;

- The farm will continue to operate to very high standards relating to water quality, as is required under the existing IPPC Licence, issued by the EPA;
- The proposed slurry storage tank will be compliant with Department of Agriculture (DAFM) Si 123 Specification for the construction of reinforced tanks; and
- There will be more than 26 weeks slurry storage on site so that pig manure will not be spread in the closed period (Oct 15<sup>th</sup> to Jan 12<sup>th</sup>) or during periods of high rainfall.



In relation to the management of risk and procedures relating to accidental release of contaminated water/slurry, reference is made to Section 1.5.4 of the EIS, which deals with Accidental Spillages / Environmental Incidents;

#### 1.5.4 Accidental Spillages / Environmental Incidents

Accidental spillages are possible on-site if a tanker valve inadvertently opens or if a slurry tanker overturns and ruptures or, if a suction hose might disconnect from a tanker when loading. Liquid fuel and feed storage tanks could leak. However, as slurry tankers have a double valve mechanism, are high-pressure containers and are not likely to leak the probability of spillage from a tanker is so remote that it can be discounted completely.

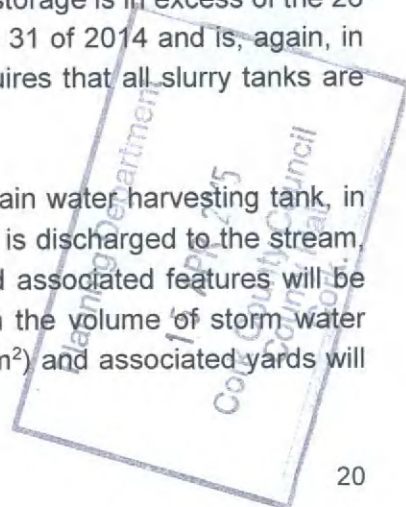
An emergency response procedure is displayed in the office and all employees are aware of it. The emergency response instructions displayed in the office of the pig unit. The following procedures are in place to deal with the possibility of off-site spillages

- Staff are instructed to notify the manager of the site immediately of a spillage event.
- There is one main slurry off take point for all pig houses – western end of house 6. The area around this is concreted to ensure that spills and drips do not soak away to ground.
- The pig manure is spread by experienced contractors and tractor operators. Their equipment is checked and renewed regularly.
- The slurry contractors have mobile phones so that they can contact the pig farm immediately if there are any emergencies.
- There is an emergency response procedure displayed in the office with relevant phone numbers of the emergency services.
- Only licensed haulers are employed to remove wastes (other than pig manure) from the site.

Table 2: Extract from EIS Section 1.5.4

In response to **Section J(3)** of the letter from Cork County Council, soiled water arising at the farm currently is stored in underground tanks between associated with the existing buildings. The total existing available storage is 9,780m<sup>3</sup>. The total proposed available storage will rise to 13,343m<sup>3</sup>, on completion of the construction works, an increase of approximately 3,550m<sup>3</sup>. The projected annual production of pig manure is approximately 12,000m<sup>3</sup>. The projected slurry storage is in excess of the 26 weeks storage capacity specified in 10 (2) and table 1 of Schedule 2 of SI 31 of 2014 and is, again, in accordance with EPA IPPC licensing requirements. The EPA license requires that all slurry tanks are integrity tested on a regular basis.

Currently, **surface (storm) water** arising on the pig farm is directed to a rain water harvesting tank, in which it is stored and used in power washing. Water not used on the farm is discharged to the stream, via an inspection chamber at the entrance bridge. The new buildings and associated features will be connected to the existing site infrastructure. There will be an increase in the volume of storm water produced due to an increase in roof area. The increased roof area (1,653m<sup>2</sup>) and associated yards will



result in an increase in the volume of storm water by approximately 2,400m<sup>3</sup> (a 10% increase overall). Water quality is monitored at the tank under the existing EPA Licensing requirements. This will continue to be the case post-construction.

Provided proper working procedures are strictly adhered to, no impacts on existing watercourses are expected, either during the construction or operation of the new development. All facilities will be built to the relevant Department of Agriculture specifications to ensure protection of water resources. The pig manure management complies with Agricultural Bye-laws and SI 31 of 2014 in relation to good agricultural practice for the protection of watercourses. Furthermore the pig farm is monitored by the EPA Office of Environmental Enforcement and is compliant with EPA requirements.

3. During the **operational** phase there is a risk of contamination of watercourses resulting from the spreading of slurry, potentially resulting in impacts on the Blackwater River cSAC.

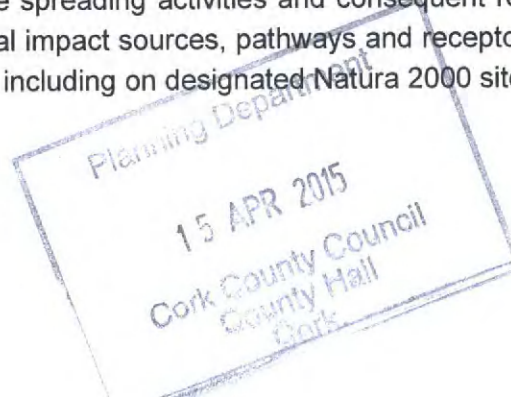
In response to **Section J(4)** of the letter from Cork County Council, organic manure arising from the pig farm will be applied to land in an appropriate manner, strictly in accordance with SI 31 of 2014 and good farm practice.

The application of fertiliser to the spread lands has been ongoing and consistent for many years. The existing habitats have adapted over time to the intensive agricultural activities practiced throughout the spread lands. Neither these habitats (all outside the Natura 2000 sites) nor the Natura 2000 sites themselves will be in anyway affected by the continued application of organic manure from the pig farm, provided the necessary mitigation measures, as detailed in the EIS and in this NIS, are adopted.

Mitigation measures pertaining to organic manure deposition:

- To avoid contamination of the local watercourses minimum buffer zones of 5m should be adhered to at all times during the application of pig manure. Buffer zones are increased depending on gradient and time of year (Article 17. (2), (g) and 17. (13) of SI 31 of 2014);
- Part 4 of SI 31 of 2014 should be adhered to (see Appendix III);
- A minimum buffer zone of 20m should be put in place and adhered to for areas which are adjacent to candidate Special Areas of Conservation (cSAC);
- Fields within cSACs are excluded from the land-spreading area;
- The guidelines for spreading state that spreading should only take place when suitable climatic and environmental conditions exist and to avoid spreading on:
  - wet or waterlogged soils;
  - land sloping steeply towards water courses;
  - frozen or snow covered soils.

Given the nature, location and type of development proposed at Annakisha Pig Farm, including the separate organic manure spreading activities and consequent reduction in the application of chemical fertiliser, and the potential impact sources, pathways and receptors, there will be no resulting impact on the natural environment, including on designated Natura 2000 sites.



#### 4.6. In combination effects

It is not expected that the proposed development will have any significant impacts on the integrity of any Natura 2000 sites. Mitigation measures outlined in this report and the draft *Sediment and Water Pollution Control Method Statement* will ensure that there will be no impacts on the integrity of the Blackwater River cSAC arising from either the construction or operation of the proposed development. Furthermore, there will be no increase in overall fertiliser application within the spread lands, as the increase in slurry spreading will be offset by a reduction in the spreading of chemical fertiliser. In addition, the mitigation measures outlined in this report will ensure that all slurry is stored and spread in an appropriate manner. The pig farm will have sufficient storage capacity (minimum 26 weeks) for slurry produced, and it will therefore be possible to restrict slurry spreading operations to days with suitable weather conditions. No slurry will be spread between 15<sup>th</sup> October and January 12<sup>th</sup>, or during periods of high rainfall.

This report concludes that no impacts are predicted from the proposed development, either at the site of the pig farm itself or resulting from the land spreading of pig manure, and therefore it is considered that, no in-combination impacts will occur. It is concluded that the proposed development either on its own or in-combination with other developments (including the existing pig farm) will have no impact on Natura 2000 sites.

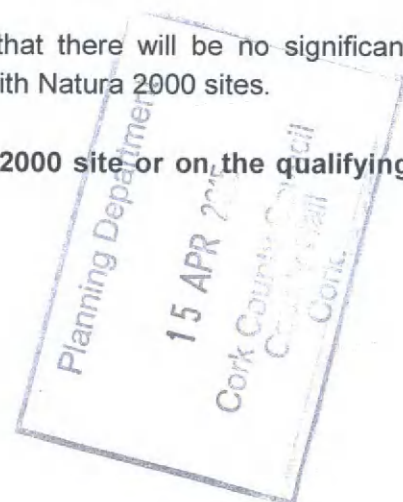
#### 4.7. Natura Impact Statement conclusion

It has been concluded that, with the mitigation measures described above in Section 4.5 fully implemented, and taking into account the draft *Sediment and Water Pollution Control Method Statement* and the Further Information Report: *Pig Manure Land Spreading Impact Assessment of Proposed Development at Annakisha Pig Farm* there will be no risk of significant negative effects on the freshwater pearl mussel, or any of the other qualifying features of the Blackwater River cSAC or any other Natura 2000 site, either alone or in combination with other plans or projects.

This assessment takes into account both the potential impacts of the proposed construction and operation of the pig unit itself, as well as the potential impacts of slurry spreading. The report shows that the proposed development will neither give rise to adverse effects on the integrity of the cSAC nor will it interfere with the achievement of the conservation objectives that apply to the cSAC.

The proposed works will be undertaken in a manner that ensures that there will be no significant impacts on other ecological receptors, in addition to those associated with Natura 2000 sites.

**In conclusion, there will be no significant impact on any Natura 2000 site or on the qualifying interests of any such site.**



## APPENDIX I: BACKGROUND TO APPROPRIATE ASSESSMENT

The Natura 2000<sup>11</sup> network is a Europe-wide network of ecologically important sites (SPAs and cSACs – also known as ‘European Sites’) that have been designated for protection under either the EU Birds Directive (*Council Directive 79/409/EEC on the Conservation of Wild Birds*) or the EU Habitats Directive (*Council Directive 92/43/EEC on the Conservation of Natural Habitats and of Wild Flora and Fauna*).

The main aim of the Habitats Directive is “to contribute towards ensuring biodiversity through the conservation of natural habitats of wild fauna and flora in the European territory of the Member States to which the treaty applies”. Any actions taken must be designed to “maintain or restore, at a favourable conservation status, natural habitats and species of wild fauna and flora of Community interest”. Under Article 6 of the Habitats Directive, an assessment is required where a plan or project may give rise to significant effects upon a Natura 2000 site.

In addition, it is a matter of law that candidate SACs (cSACs) and Sites of Community Importance (SCI) are considered in this process.

Article 6 (paragraphs (3) and (4)) of the Habitats Directive states that:

(3) Any plan or project not directly connected with or necessary to the management of the site but likely to have significant effect thereon, either individually or in combination with other plans or projects, shall be subject to Appropriate Assessment of its implications for the site in view of the site’s conservation objectives. In the 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.

(4) If, in spite of a negative assessment of the implications for the 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 social or economic nature, the Member State 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.”

The requirements of the Habitats Directive are transposed into Irish law by means of the *European Communities (Birds and Natural Habitats) Regulations 2011* (hereafter referred to as the *Birds and Habitats Regulations*)<sup>12</sup> and by the *Planning and Development (Amendment) Act 2010*, as amended.

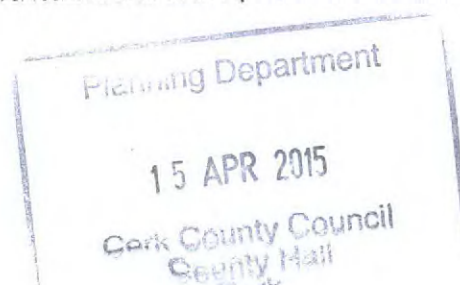
In Ireland, the statutory agency responsible for the designated areas is NPWS.

### Stages in the assessment

European Commission guidance (2001)<sup>13</sup> sets out the principles on how to undertake decision making in applying the Habitats Directive. The requirements of the Habitats Directive comprise four distinct stages:

<sup>11</sup> The EU Habitats Directive, Article 3.1, states “A Coherent European ecological network of Special Areas of Conservation and Special Protection Areas pursuant to Directive 79/409/EEC shall be set up under the title Natura 2000”

<sup>12</sup> SI No. 477 of 2011



**Stage 1:** Screening is the process which initially identifies the likely impacts upon a European site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts may be significant. It is important to note that the burden of evidence is to show, on the basis of objective information, that there will be no significant effect; if the effect may be significant, or is not known, that would trigger the need for an Appropriate Assessment. There is European Court of Justice case law to the effect that unless the likelihood of a significant effect can be ruled out on the basis of objective information, then an Appropriate Assessment must be made.

**Stage 2:** Appropriate Assessment is the detailed consideration of the impact on the integrity of the European site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's conservation objectives and its structure and function. This is to determine whether or not there will be adverse effects on the integrity of the site. This stage also includes the development of mitigation measures to avoid or reduce any possible impacts.

**Stage 3:** Assessment of alternative solutions is the process which examines alternative ways of achieving the objectives of the project or plan that would avoid adverse impacts on the integrity of the European site, should avoidance or mitigation measures be unable to cancel out adverse effects.

**Stage 4:** Assessment where no alternative solutions exist and where adverse impacts remain. At Stage 4 an assessment is made with regard to whether or not the development is necessary for imperative reasons of overriding public interest (IROPI) and, if so, of the compensatory measures needed to maintain the overall coherence of the Natura 2000 network.

### Conservation objectives of European sites

The conservation objectives for a European Site are intended to represent the aims of the Habitats and Birds Directives in relation to that site. To this end, habitats and species of European Community importance should be maintained or restored to 'favourable conservation status' (FCS), as defined in Article 1 of the Habitats Directive below:

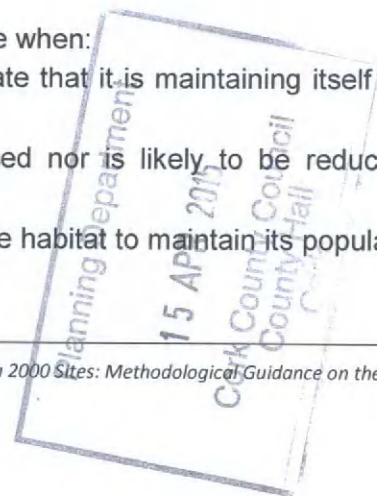
The conservation status of a natural habitat will be taken as 'favourable' when:

- Its natural range and the 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;
- Conservation status of typical species is favourable as defined in Article 1(i).

The conservation status of a species will be taken as favourable 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.

<sup>13</sup> European Commission (2001) *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*



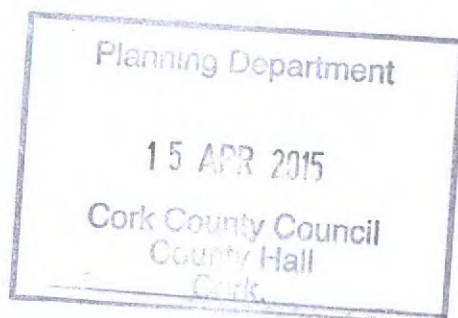


Guidance from the European Commission<sup>14</sup> indicates that the Habitats Directive intends FCS to be applied at the level of an individual site, as well as to habitats and species across their European range. Therefore, in order to properly express the aims of the Habitats Directive for an individual site, the conservation objectives for a site are essentially to maintain (or restore) the habitats and species of the site at (or to) FCS.

The European Commission guidance recommends that screening should fulfil the following steps:

1. Determine whether the plan (or policy) is directly connected with or necessary for the management of Natura 2000 sites;
2. Describe the plan and describe and characterise any other plans or projects which, in combination, have the potential for having significant effects on Natura 2000 sites;
3. Identify the potential effects on Natura 2000 sites;
4. Assess the likely significance of any effects on Natura 2000 sites.

Generic Conservation Objectives for the sites have been provided by NPWS and are presented in **Appendix II**.



<sup>14</sup> Managing Natura 2000 sites: the provisions of Article 6 of the Habitats Directive 92/43/EEC. (European Commission 2000)

## APPENDIX II: RELEVANT DESIGNATED SITES

### Blackwater River cSAC (Cork/Waterford) (002170)

The Blackwater River cSAC has been designated on the basis that it supports the following habitats and species of European importance.

#### Qualifying Interests

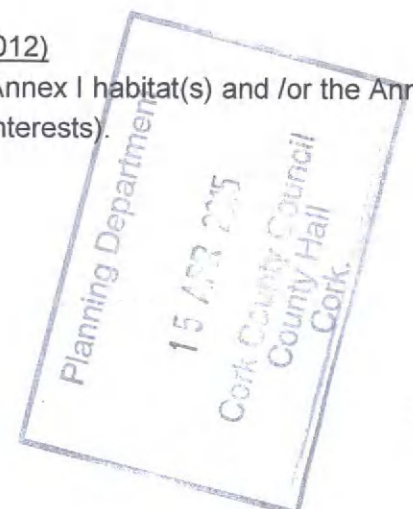
- Freshwater pearl mussel (*Margaritifera margaritifera*) [1029]
- White-clawed crayfish (*Austropotamobius pallipes*) [1092]
- Sea lamprey (*Petromyzon marinus*) [1095]
- Brook lamprey (*Lampetra planeri*) [1096]
- River lamprey (*Lampetra fluviatilis*) [1099]
- Twaite shad (*Alosa fallax fallax*) [1103]
- Salmon (*Salmo salar*) [1106]
- Estuaries [1130]
- Mudflats and sandflats not covered by seawater at low tide [1140]
- Perennial vegetation of stony banks [1220]
- *Salicornia* and other annuals colonizing mud and sand [1310]
- Atlantic salt meadows (*Glaucopuccinellietalia maritimae*) [1330]
- Otter (*Lutra lutra*) [1355]
- Mediterranean salt meadows (*Juncetalia maritimi*) [1410]
- Killarney fern (*Trichomanes speciosum*) [1421]
- Water courses of plain to montane levels with the *Ranunculion fluitantis* and *Callitriche-Batrachion* vegetation [3260]
- Old sessile oak woods with *Ilex* and *Blechnum* in British Isles [91A0]
- Alluvial forests with *Alnus glutinosa* and *Fraxinus excelsior* (*Alno-Padion*, *Alnion incanae*, *Salicion albae*) [91E0]
- *Taxus baccata* woods of the British Isles [91J0] (currently under review)

#### Vulnerability (extracted from Natura 2000 Standard Data Form)

While water quality in the system is mostly good there are localised stretches which have been polluted. Pollution is derived from agricultural run-off (fertilisers, slurry etc.) and from point sources mainly in towns along the rivers, and in some areas possibly forestry activities. Pollution remains a threat to water quality and poor water quality could impact on the various fish populations as well as *Margaritifera margaritifera* and *Austropotamobius pallipes*. Riverbank protection works to prevent erosion and fisheries related developments have recently occurred in parts of the Blackwater and some involve interference with the riverbed - such works could affect *Margaritifera margaritifera* populations. Most of the remaining woodlands have a significant amount of non-native species, including conifers and the invasive *Rhododendron ponticum*. If not controlled, the value of the woods will decrease further with time.

#### Site-Specific Conservation Objectives for the cSAC (dated 31 July 2012)

To maintain or restore the favourable conservation condition of the Annex I habitat(s) and /or the Annex II species for which the cSAC has been selected (i.e. the qualifying interests).



**APPENDIX III: CODE OF PRACTICE FOR LAND-SPREADING PIG MANURE (AS SET OUT IN PART 4 OF SI 31 OF 2014)****PART 4****PREVENTION OF WATER POLLUTION FROM FERTILISERS AND CERTAIN ACTIVITIES***Distances from a water body and other issues*

17.

(2) Organic fertiliser or soiled water shall not be applied to land within—

- (a) 200m of the abstraction point of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 100m<sup>3</sup> or more of water per day or serving 500 or more persons,
- (b) 100m of the abstraction point (other than an abstraction point specified in paragraph (a)) of any surface waters, borehole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m<sup>3</sup> or more of water per day or serving 50 or more persons,
- (c) 25m of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a) or (b),
- (d) 20m of a lake shoreline,
- (e) 15m of exposed cavernous or karstified limestone features (such as swallow-holes and collapse features),
- (f) subject to sub-article (13), 5m of any surface waters (other than a lake or surface waters specified at paragraph (a) or (b)), or
- (g) the distance specified in sub-article 2(f) shall be increased to 10m for a period of two weeks preceding and two weeks following the periods specified in Schedule 4.

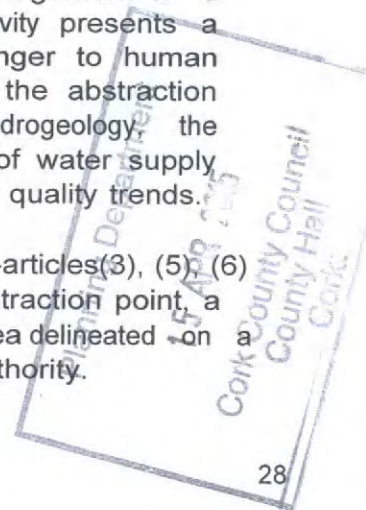
(3) Notwithstanding the requirements of sub-articles (2)(a), (2)(b) and (2)(c), the following distances shall apply-

- (a) 30m from the abstraction point in the case of any surface waters, bore-hole, spring or well used for the abstraction of water for human consumption in a water scheme supplying 10m<sup>3</sup> or more of water per day or serving 50 or more persons,
- (b) 15m from the abstraction point in the case of any borehole, spring or well used for the abstraction of water for human consumption other than a borehole, spring or well specified in paragraph (a).



## 16 [31]

- (4) Sub-article (3) shall only apply in situations where a local authority has completed a technical assessment of conditions in the vicinity of the abstraction point, including taking into account variation in soil and subsoil conditions, the landspreading pressures in the area, the type of abstraction, available water quality evidence and the likely risk to the water supply source and the local authority has determined that the distance does not give rise to a risk to the water supply and a potential danger to human health.
- (5) A local authority may decide to apply the landspreading restriction to the upstream catchment area and to the close proximity downstream of the abstraction point in the case of any surface waters.
- (6) A local authority may, in the case of any particular abstraction point and following consultation with the Agency, specify a greater distance to that specified in sub-articles (2) or (3) where, following prior investigations, the authority is satisfied that such distance is appropriate for the protection of waters being abstracted at that point. The distance so specified shall be determined by the local authority using an evidence-based approach which takes into account the natural vulnerability of the waters to contamination from land spreading, the potential risk to human health arising from the landspreading activity as well as the water quality evidence, including information on water quality trends.
- (7) Notwithstanding the provisions of sub-articles (2), (3) and (6) a local authority shall as soon as may be practicable, following prior investigations and following consultation with the Agency, specify an alternative distance, including a landspreading exclusion area where necessary, in the case of a water abstraction for human consumption in a scheme supplying 10m<sup>3</sup> or more of water per day, or serving 50 or more persons, where—
- (a) on the basis of the results of monitoring carried out for the purposes of Article 7 of the European Communities (Drinking Water) (No. 2) Regulations 2007 (S.I. No. 278 of 2007), the quality of water intended for human consumption does not meet the parametric values specified in Part I of the Schedule of those Regulations or the quality of water constitutes a potential danger to human health, and it appears to the local authority that this is due to the landspreading of organic fertilisers or soiled water in the vicinity of the abstraction point, or
- (b) investigations undertaken by Irish Water as part of the management of a water supply scheme indicate that the landspreading activity presents a significant risk to the drinking water supply or a potential danger to human health having regard to catchment factors in the vicinity of the abstraction point including but not limited to slope, vulnerability, and hydrogeology, the scale and intensity of land spreading pressures, the type of water supply source and water quality evidence, including information on water quality trends.
- (8) A distance specified by a local authority in accordance with sub-articles (3), (5), (6) and (7) may be described as a distance or distances from an abstraction point, a hydrogeological boundary or topographical feature or as an area delineated on a map or in such other way as appears appropriate to the authority.



[31] 17

(9) In relation to sub-articles (6) and (7), "prior investigations" means, in relation to an abstraction point, an assessment of the susceptibility of waters to contamination in the vicinity of the abstraction point having regard to—

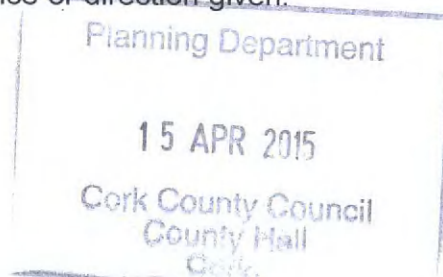
- (a) the direction of flow of surface water or groundwater, as the case may be,
- (b) the slope of the land and its runoff potential,
- (c) the natural geological and hydrogeological attributes of the area including the nature and depth of any overlying soil and subsoil and its effectiveness in preventing or reducing the entry of harmful sub-stances to water, and
- (d) where relevant, the technical specifications set out in the document "Groundwater Protection Schemes" published in 1999 (ISBN 1-899702-22-9) or any subsequent published amendment of that document.

(10) Where a local authority specifies a distance in accordance with either of sub-articles (3), (5), (6) or (7) the authority shall, as soon as may be—

- (a) notify the affected landowners, Irish Water, the Agency and the Department of Agriculture, Food and the Marine of the distance so specified,
- (b) send to the Agency a summary of the report of any investigations undertaken and the reasons for specifying the alternative distance,
- (c) make an entry in the register maintained in accordance with Article 30(6), and
- (d) publish and maintain on the local authority website an updated schedule of setback distances specified for each drinking water supply.

(11) The requirements under sub-article (10) shall apply in the case of each public water supply and supplies for which the local authority has supervisory authority.

(12) The Agency may issue advice and/or direction to a local authority in relation to any requirements including requirements for technical assessments and prior investigations arising under sub-articles (2), (3), (4), (5), (6), (7), (8) or (9) and a local authority shall comply with any such advice or direction given.



## 18 [31]

(13) Notwithstanding sub-article (2)(f), organic fertiliser or soiled water shall not be applied to land within 10m of any surface waters where the land has an average incline greater than 10% towards the water.

*Requirements as to manner of application of fertilisers, soiled water etc*

18. (1) Livestock manure, other organic fertilisers, effluents, soiled water and chemical fertilisers shall be applied to land in as accurate and uniform a manner as is practically possible.

(2) Organic and chemical fertilisers or soiled water shall not be applied to land in any of the following circumstances—

- (a) the land is waterlogged;
- (b) the land is flooded or likely to flood;
- (c) the land is snow-covered or frozen;
- (d) heavy rain is forecast within 48 hours, or
- (e) the ground slopes steeply and there is a risk of water pollution having regard to factors such as surface runoff pathways, the presence of land drains, the absence of hedgerows to mitigate surface flow, soil condition and ground cover.

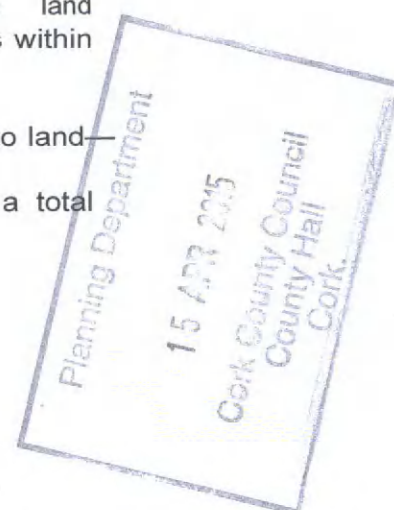
(3) A person shall, for the purposes of sub-article (2)(d), have regard to weather forecasts issued by Met Éireann.

(4) Organic fertilisers or soiled water shall not be applied to land—

- (a) by use of an umbilical system with an upward-facing splashplate,
- (b) by use of a tanker with an upward-facing splashplate,
- (c) by use of a sludge irrigator mounted on a tanker, or
- (d) from a road or passageway adjacent to the land irrespective of whether or not the road or passageway is within or outside the curtilage of the holding.

(5) Subject to sub-article (6), soiled water shall not be applied to land—

- (a) in quantities which exceed in any period of 42 days a total quantity of 50,000 litres per hectare, or
- (b) by irrigation at a rate exceeding 5 mm per hour.



(6) In an area which is identified on maps compiled by the Geological Survey of Ireland as "Extreme Vulnerability Areas on Karst Limestone Aquifers", soiled water shall not be applied to land—

- (a) in quantities which exceed in any period of 42 days a total quantity of 25,000 litres per hectare, or
- (b) by irrigation at a rate exceeding 3 mm per hour unless the land has a consistent minimum thickness of 1m of soil and subsoil combined.

(7) For the purposes of sub-article (6), it shall be assumed until the contrary is shown that areas so identified as "Extreme Vulnerability Areas on Karst Limestone Aquifers" do not have a consistent minimum thickness of 1m of soil and subsoil combined.

*Periods when application of fertilisers is prohibited*

19. (1) Subject to this Article, the application of fertiliser to land is prohibited during the periods specified in Schedule 4.

(2) Sub-article (1) shall not apply in relation to the application to land of—

- (a) soiled water, or
- (b) chemical fertilisers to meet the crop requirements of Autumn-planted cabbage or of crops grown under permanent cover, or
- (c) fertilisers whose application rate or usage rate is less than 1kg per hectare of available nitrogen or phosphorus.

*Limits on the amount of livestock manure to be applied*

20. (1) The amount of livestock manure applied in any year to land on a holding, together with that deposited to land by livestock, shall not exceed an amount containing 170 kg of nitrogen per hectare.

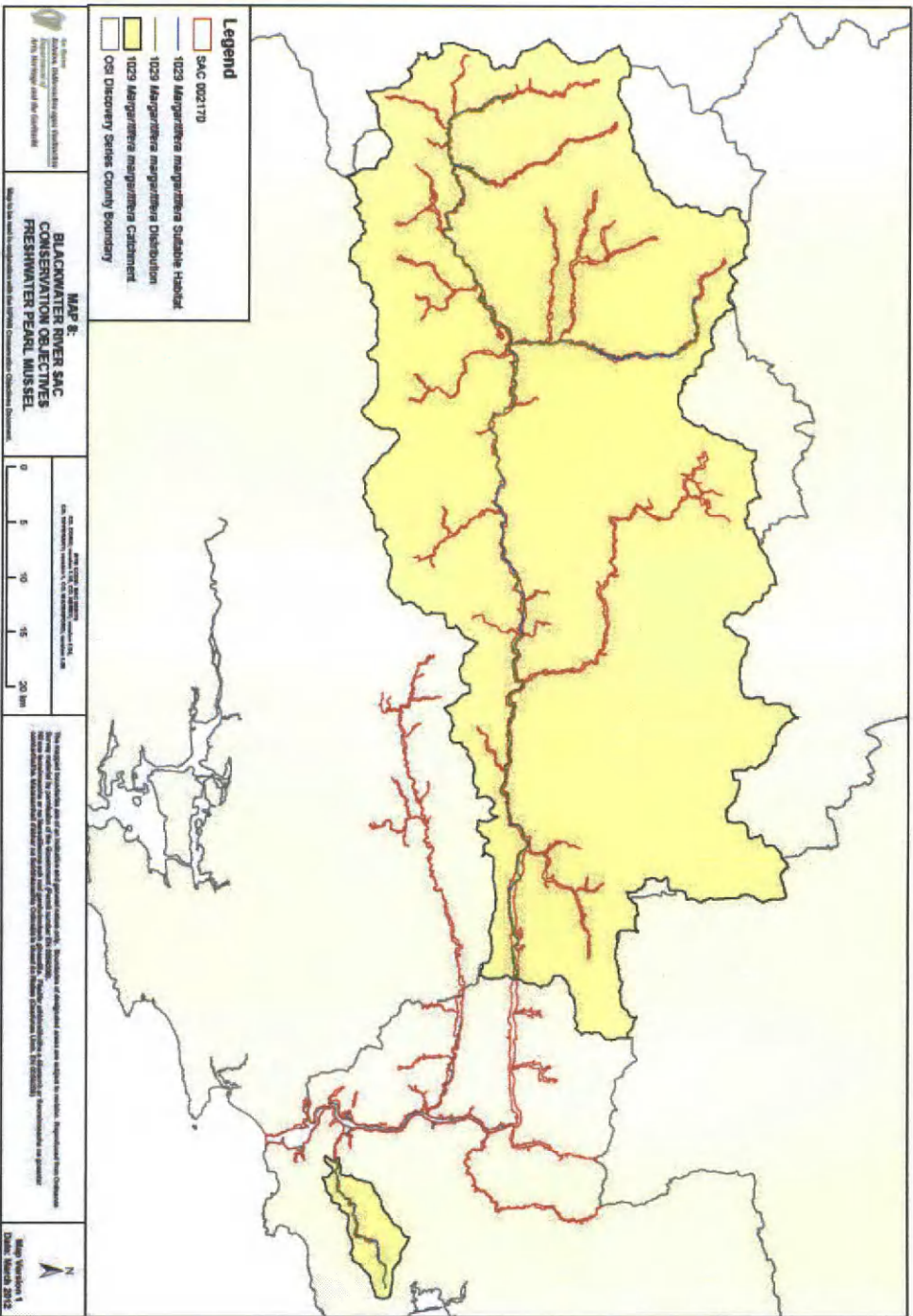
(2) For the purposes of sub-article (1), the amount of nitrogen produced by livestock and the nitrogen content of livestock manure shall be calculated in accordance with Tables 6, 7 and 8 of Schedule 2 except in the case of pig manure or poultry manure where a different amount is specified in a certificate issued in accordance with Article 32 in relation to that manure.

(3) For the purposes of sub-article (1), the area of a holding shall be deemed to be the eligible area of the holding.

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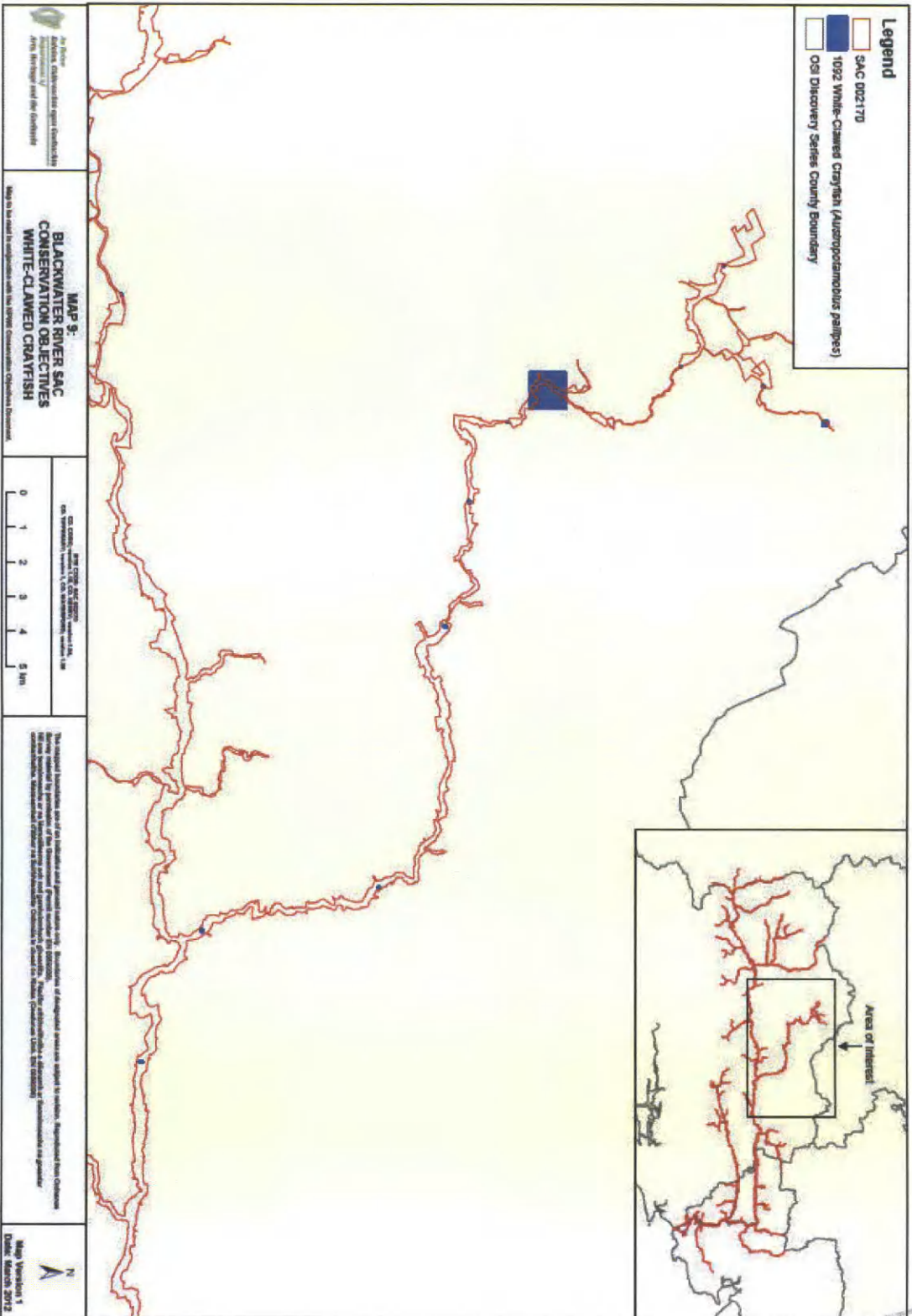
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APPENDIX IV: MAPS EXTRACTED FROM THE NPWS CONSERVATION OBJECTIVES DOCUMENT FOR THE BLACKWATER RIVER CSAC (002170), DATED JULY 2012

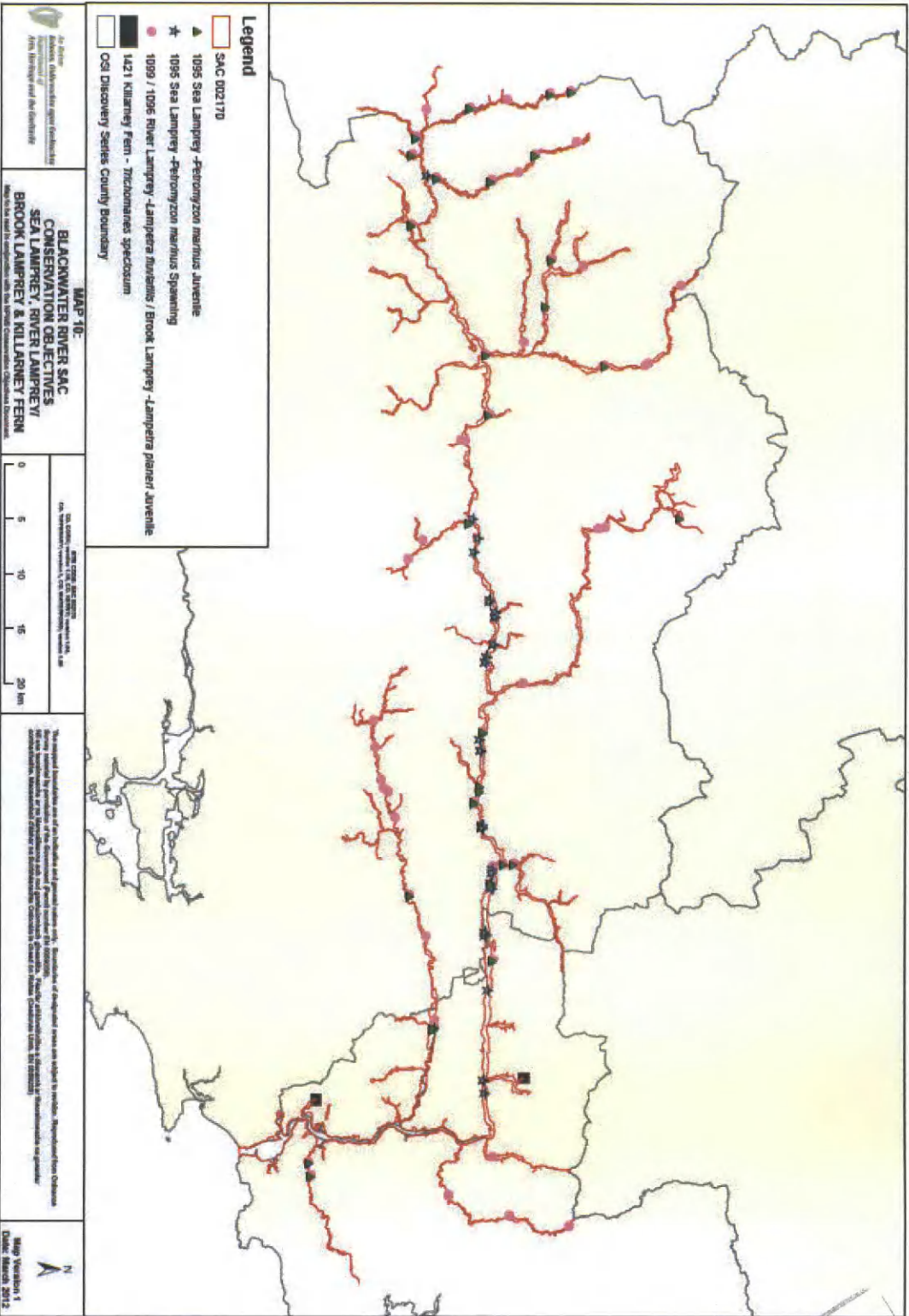


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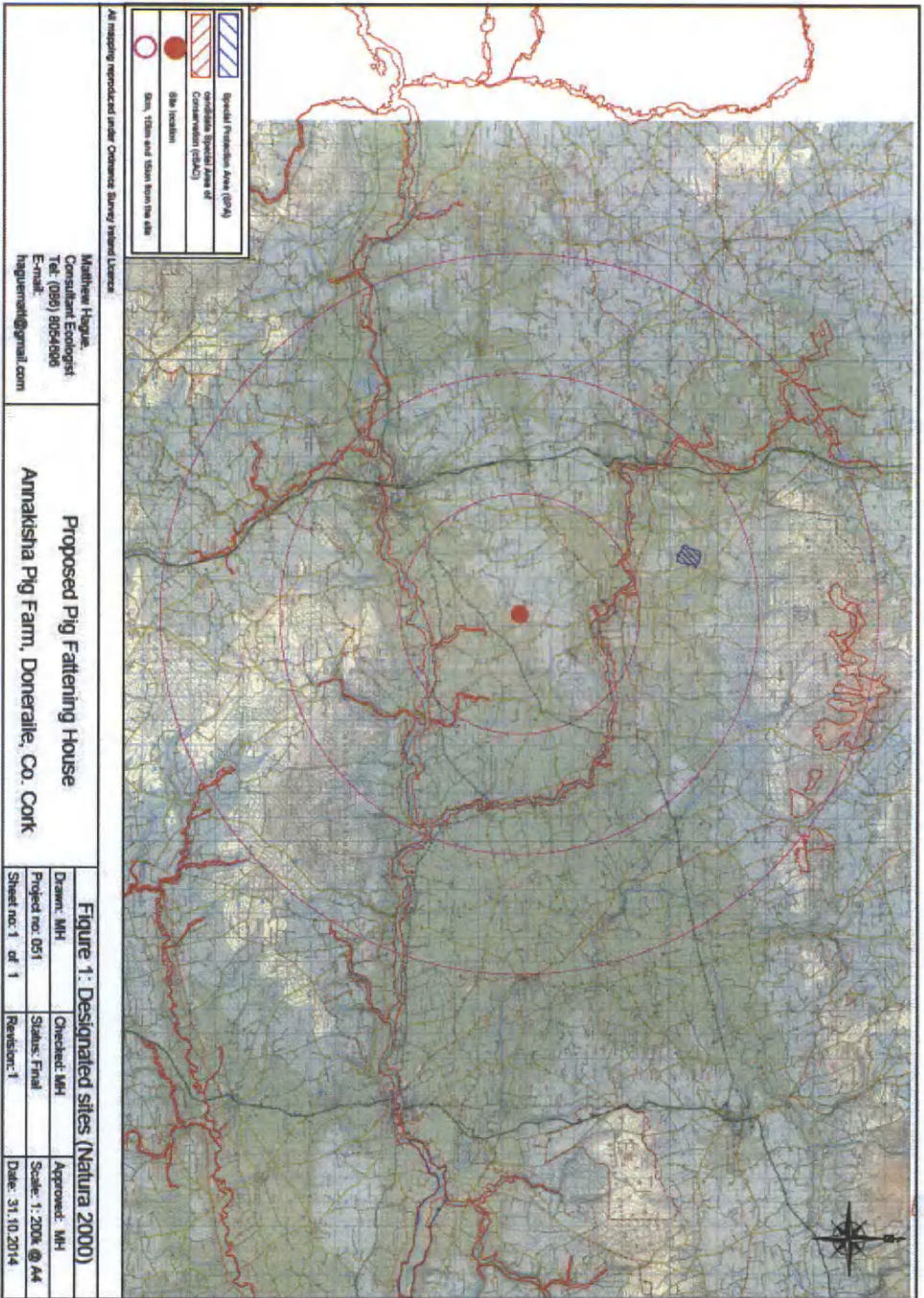


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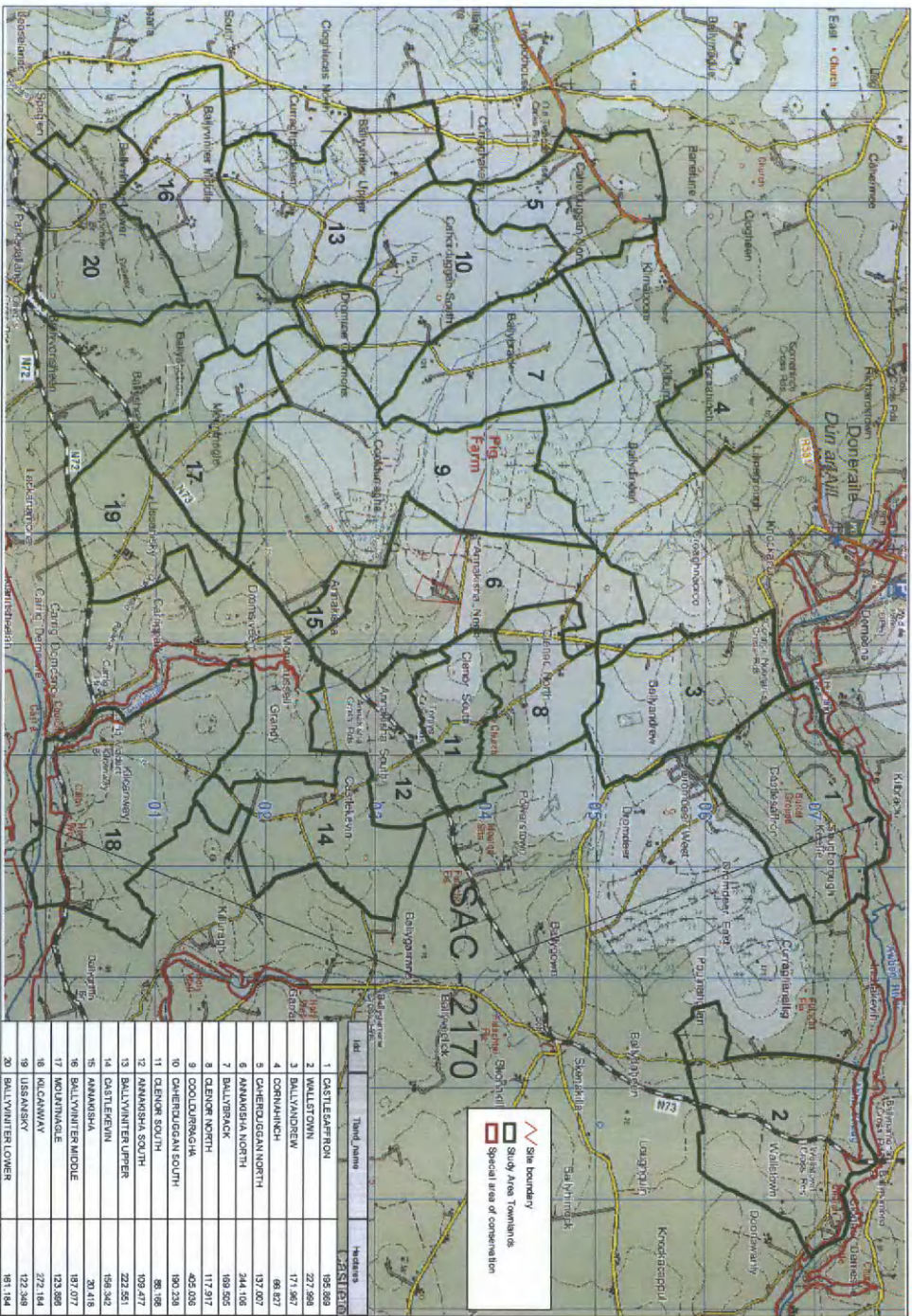
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FIGURE 1: NATURA 2000 SITES



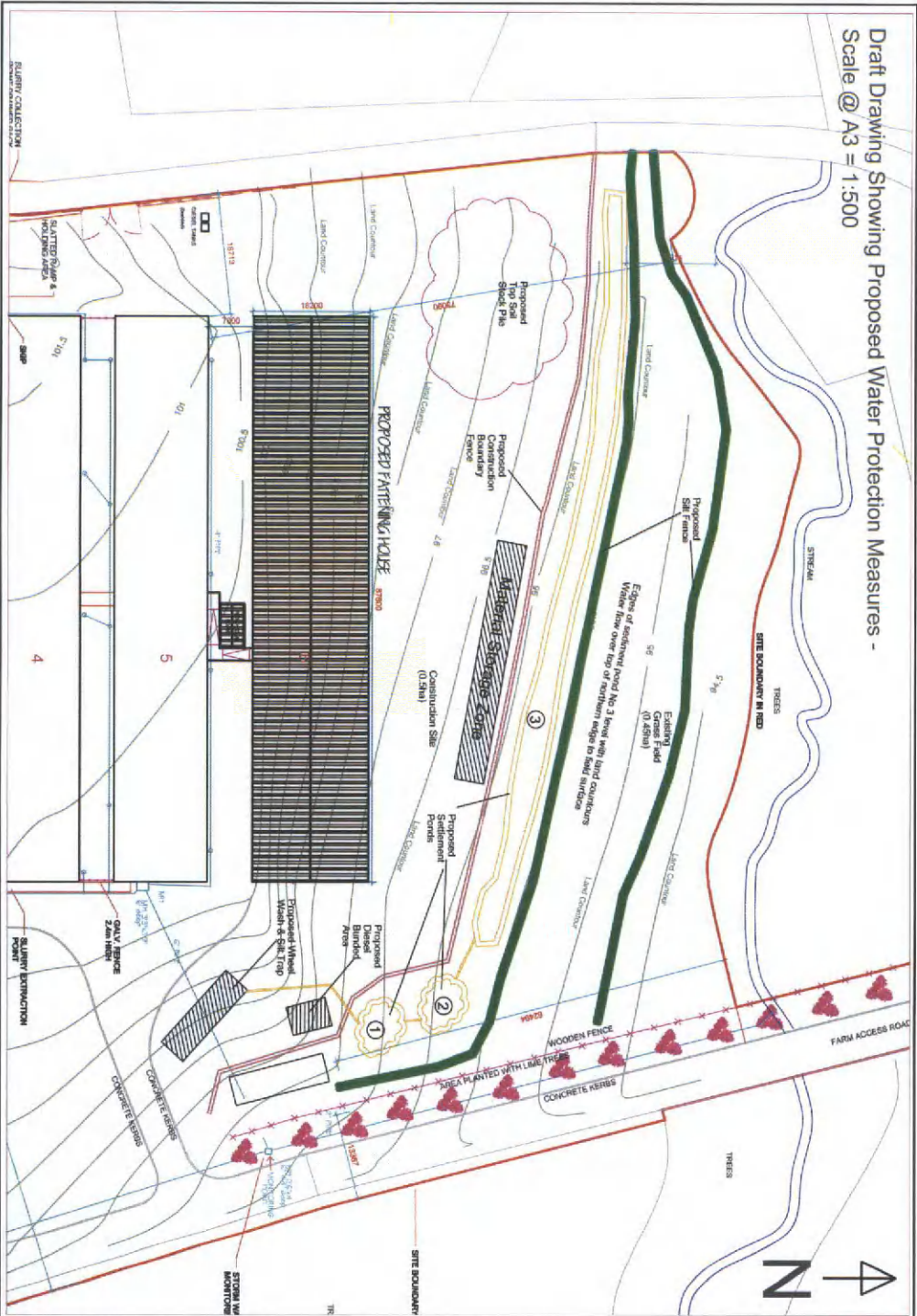
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FIGURE 2: LOCATIONS OF SLURRY LAND SPREADING ASSESSMENT



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FIGURE 3: DRAFT SEDIMENT AND WATER POLLUTION CONTROL METHOD STATEMENT FIGURE: LOCATION OF WATER PROTECTION MEASURES



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**PLATES**



**Plate 1: Typical view of fields suitable for land spreading of slurry**



**Plate 2: Typical view of fields suitable for land spreading of slurry**

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