

**WATER ABSTRACTION FACILITY AND WATER
PIPELINE**

**Land at 20 Shore Road, Shore Road/Ingram's
Road/Ballyvannon Road, Near Glenavy, County Antrim**

**PRELIMINARY ARTICLE 6 ASSESSMENT
TEST OF LIKELY SIGNIFICANCE**

June 2009

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1.0 INTRODUCTION

1.1 The Conservation Designations and Protection Directorate within Northern Ireland Environment Agency (NIEA) requested that an Article 6 assessment as outlined in the Habitats Directive be completed for the development of a water abstraction facility and water pipeline to serve a proposed biomass fuelled power plant near Glenavy, Co. Antrim. Rose Energy Ltd engaged MARENCO Environmental Consultants to complete the assessment. The output from this Article 6 assessment is a 'Test of Likely Significance'. This document seeks to address this Test of Likely Significance.

2.0 BRIEF DESCRIPTION OF THE PROJECT

2.1 Rose Energy Ltd submitted a planning application in June 2008 (reference S/2008/0630) for a biomass fuelled power plant on a site off Ballyvannon Road, near Glenavy, adjacent to the industrial plant of Ulster Farm By Products. The proposed development requires water to create steam for driving the turbine to generate electricity and for cooling purposes. It is intended to source water (approximately 160 m³ per hour) from Lough Neagh and pump the water to the proposed power plant site via a 1.9 km long 280 mm diameter pipeline laid underneath Shore Road, Ingram's Road and part of Ballyvannon Road. Figure 1 illustrates the route of the proposed pipeline from the site of the abstraction point on land opposite 20 Shore Road to the proposed power plant site. The pipeline crosses approximately 80 m of agricultural grassland before reaching Shore Road.

2.2 The proposed site for the water abstraction facility (centre grid reference IJ 121 721) is situated on 0.25 ha of agricultural grassland between Lough Neagh and Shore Road. A channel has been excavated along the south west boundary of this site to form a 'harbour' for small fishing boats. Water will be abstracted from this channel and pumped via the pipeline to the proposed power plant.

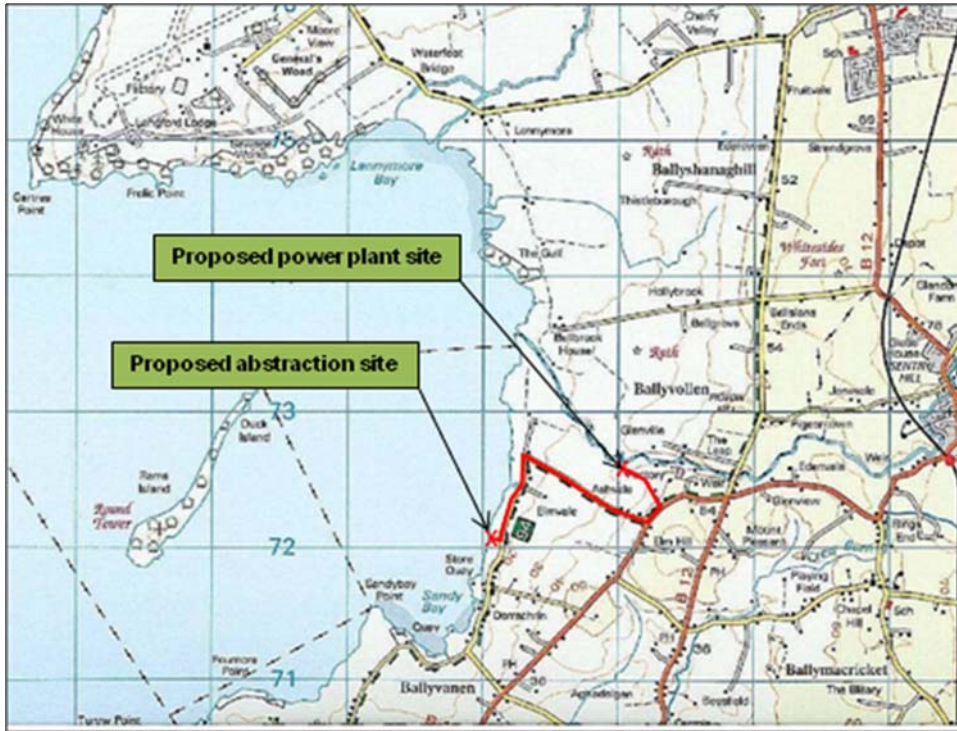


Figure 1: Site Location
(OSNI Licence No 2412)

3.0 BRIEF DESCRIPTION OF THE NATURA 2000 SITE

Lough Neagh Special Protection Area (SPA):

- 3.1 Lough Neagh is a large, shallow, eutrophic lake contained within Counties Antrim, Down, Londonderry and Tyrone. Lough Neagh is the largest freshwater lake in the UK and is one of the top ten sites in the UK for wintering waterfowl (based on annual mean numbers). The SPA also includes the smaller lakes, Lough Beg (25 km north west of proposed abstraction site) and Portmore Lough (2.5 km south of proposed abstraction site). The main habitats within the SPA are open water with beds of submerged aquatic vegetation, species-rich wet grassland, reedbed, islands, swamp, fen and carr woodland. The SPA supports internationally important numbers of wintering waterfowl and is internationally important for a number of wildfowl species including Whooper Swan, Bewick's Swan, Pochard, Tufted Duck, Scaup and Goldeneye. It is also internationally important for breeding Common Tern.
- 3.2 Numbers and population data for the SPA qualifying species, as sourced from the NIEA Citation for Lough Neagh SPA is presented over page in Table 3.1.

Table 3.1 SPA Qualifying Species

Species	Number of Individuals	Population (5 year peak average 1989/90 to 1993/94 unless stated)
Common Tern breeding population	200 pairs in 1995	7.5% of the breeding population in Ireland in 1995
Great Crested Grebe breeding population	500 pairs	New feature since designation
Great Crested Grebe passage population	2440	(1995 max count)
Bewick's Swan wintering population	251	10% of Irish population 1.5% of Western and Central Europe population
Whooper Swan wintering population	923	6.5% of Irish population 5.4% of Icelandic population
Great Crested Grebe wintering population	741	24.7% of Irish population
Pochard wintering population	32,165	80.4% of Irish population 9.2% of North-west European population
Tufted Duck wintering population	23,476	58.7% of Irish population 3.1% of North-west European population
Scaup wintering population	2,557	85.2% of Irish population
Goldeneye wintering population	12,479	~ 100% of Irish population 4.2% of North-west European population
Little Grebe wintering population Assemblage species	390	26% of Irish population
Cormorant wintering population Assemblage species	781	3.9% of Irish population
Greylag Goose wintering population Assemblage species	129	3.4% of Irish population
Shelduck wintering population Assemblage species	165	2.3% of Irish population
Wigeon wintering population Assemblage species	3,447	2.8% of Irish population
Gadwall wintering population Assemblage species	114	19% of Irish population
Teal wintering population Assemblage species	1,868	2.9% of Irish population
Mallard wintering population Assemblage species	4,982	10% of Irish population
Shoveler wintering population Assemblage species	173	2.7% of Irish population
Coot wintering population Assemblage species	6,676	26.7% of Irish population
Mute Swan wintering population Assemblage species	1,375	22.9% of Irish population
Breeding bird assemblage: Great Crested Grebe, Gadwall, Pochard, Tufted Duck, Snipe, Redshank, Common Gull, Lesser Black-backed Gull, Black-headed Gull, Shelduck, Teal, Shoveller, Lapwing and Curlew.		

4.0 DESCRIBE THE INDIVIDUAL ELEMENTS OF THE PROJECT (EITHER ALONE OR IN COMBINATION WITH OTHER PLANS OR PROJECTS) LIKELY TO GIVE RISE TO IMPACTS ON THE NATURA 2000 SITE

The elements of this project likely to give rise to impacts on the Natura 2000 site are:

- general works to construct the water abstraction facility and lay the pipeline
- ongoing water abstraction from Lough Neagh

This project is required to provide a proposed power plant development, situated approximately 1 km east of Lough Neagh, with water to create steam to generate electricity and for also for cooling purposes. A preliminary Article 6 assessment was produced for the power plant development in November 2008¹. Elements of that project identified that may give rise to impacts on the Natura 2000 site were:

- construction and operation of the plant
- overhead power cables
- discharge to Glenavy River
- air emissions

5.0 DESCRIBE ANY LIKELY DIRECT, INDIRECT OR SECONDARY IMPACTS OF THE PROJECT (EITHER ALONE OR IN COMBINATION WITH OTHER PLANS OR PROJECTS) ON THE NATURA 2000 SITE

5.1 Size and scale

5.1.1 The total length of the pipeline from the abstraction site adjacent to the SPA boundary to the proposed power plant development site is 2.3 km, all to be laid underground, of which 1.9 km will be laid under existing roads. The pipeline will cross approximately 80 m of semi-improved neutral grassland between Lough Neagh and Shore Road.

5.1.2 The power plant development site is situated on 5 ha of agricultural grassland approximately 1 km from the eastern boundary of Lough Neagh. An additional 2.5 ha of grassland adjacent to the site will be used as a temporary construction and materials compound.

¹ Biomass Fuelled Power Plant. Preliminary Article 6 Assessment, Test of Likely Significance, November 2008, MARENCO.

5.2 Land-take

- 5.2.1 Approximately 45 m² of grassland will be removed to accommodate the pump sump and valve chamber of the water abstraction facility. A control kiosk will be placed on the site and will cover approximately 8 m² of grassland. It is intended that this will replace an existing small metal container on site.
- 5.2.2 There will be 5 ha of grassland developed as part of the proposed power plant development.
- 5.2.3 There will be no land take within the bounds of the SPA as part of this project or the proposed power plant development. The grassland lost to the project proposals is not an important habitat for feature SPA species and therefore will not have a significant impact on the Natura 2000 site.

5.3 Distance from the Natura 2000 site or key features of the site

- 5.3.1 The abstraction facility will be sited on agricultural grassland adjacent to the Natura 2000 site. Water will be abstracted directly from Lough Neagh and pumped to the proposed power plant development site which is approximately 1 km east of the SPA boundary.
- 5.3.2 Wintering bird surveys^{2&3} were undertaken during 2008 and 2009 in the three WeBS count sectors closest to the proposed development areas. These surveys recorded a diverse assemblage of wintering wildfowl and waders. Wildfowl were mainly associated with open water and the water's edge, while the waders used damp grassland at the mouth of the Glenavy and Crumlin rivers (between 1.5 km and 3 km north of the proposed abstraction site). Suitable breeding habitat for great crested grebes is present at Sandy Bay, approximately 1 km south of the abstraction site. The abstraction site does not contain important habitats for any feature breeding or wintering bird species. Wildfowl recorded in the WeBS sector Sandy Bay to Ingram's Road (sector 02531) were largely well offshore towards Rams Island. This may be attributed to disturbance from nearby sand trader's operations and wildfowlers.

² Rose Energy Project: Winter Bird Survey, Lough Neagh, County Antrim. March 2008, Clonaog Environmental

³ Rose Energy Project: Additional Winter Bird Survey 2008-2009, Lough Neagh, County Antrim. March 2009, Clonaog Environmental

5.4 Resource requirements

5.4.1 The project will require an intake of approximately 160 m³ per hour from Lough Neagh. In order to estimate the risk of entrainment, the swimming capacity of eel, pollan and roach was compared with the velocity of the water drawn into the abstraction plant. Eels > 130 mm are unlikely to be at risk of entrainment due to their swimming capacity. The benthic nature of eels of all sizes will further limit the likelihood of entrainment of this economically and conservationally important species. However, the poor swimming capacity of larval pollan and roach indicates that if present in the abstraction area, these species are at risk of entrainment. Fishes are characterised by high levels of fecundity, and the estimated numbers of larvae lost weekly to abstraction represent the annual reproductive output of <1 female roach or pollan, prior to the action of other mortality factors. The risk of entrainment of fish can be minimised through design and the provision of suitable screening of the water intake, and this should be considered in the construction of any abstraction⁴.

5.5 Emissions

5.5.1 Construction works are likely to involve the use of potential contaminants such as fuels and cement. These contaminants can, if improperly managed, pose a risk to surface water and groundwater. Dewatering during construction has the potential to result in water containing elevated suspended solids entering Lough Neagh which could have a detrimental effect on water quality. It is considered that the implementation of appropriate Working Procedures and an Earthworks Management Plan will address any potential risk from construction activities for this project and for the development of the proposed power plant.

5.5.2 During operation of the proposed power plant, cooling waters will be treated along with other effluent and passed to the SuDS lagoon, which will also be used to allow the heated water to cool before discharge to the Glenavy River under a Discharge Consent issued by NIEA. Initial design estimates are that the discharge will be approximately 60m³ per hour.

5.5.3 The power plant will use fluidised bed technology as an efficient form of combustion. Combustion gases will be held at above 850°C > 2 seconds to

⁴ Ecological Assessment of the Sensitivity of Lennymore Bay, Lough Neagh to a Small Scale Water Abstraction. June 2009, C. Harrod.

ensure complete combustion of the fuel. Gases from the process will be passed through a flue gas process to control emissions of toxic gases, vapours and particles before being discharged from an 80 m high stack.

5.6 Excavation requirements

5.6.1 There will be no excavation requirements within the boundary of the SPA for this project or for the proposed power plant development. Excavation will be required to construct the pumping and water abstraction facility and to lay the pipeline between the lough shore and Shore Road. The implementation of a construction Environmental Management Plan will address any potential risk to the feature species of Lough Neagh from this excavation work.

5.7 Transportation requirements

5.7.1 During construction there will be movement of various plant and an increase in vehicular movement will occur on existing roads in the vicinity of the proposed project. However, it is unlikely that transportation will impact on bird species using the SPA, as disturbance levels are already high given the proximity to two sand trader sites.

5.7.2 Increased vehicular activity from the proposed power plant development will not impact upon the SPA feature species due to the distance that the site is situated away from the lough.

5.8 Duration of construction, operation, decommissioning etc.

5.8.1 It is expected that the construction phase for this project to construct the water abstraction facility and lay the pipeline will take no longer than 2 months to complete.

5.8.2 It is expected that it will take approximately two and a half years to construct the proposed power plant. The operational lifetime of the project is expected to be over 30 years.

6.0 DESCRIBE ANY LIKELY CHANGES TO THE SITE

6.1 Reduction of habitat area

6.1.1 The project will not lead to a reduction in habitat area within the SPA, or of habitats important for feature species of the SPA.

6.2 Disturbance to key species

6.2.1 During its operational phase, the water abstraction facility will not cause disturbance to the key SPA species. It is unlikely that the construction works to install this facility and the pipeline will disturb feature species given the already high levels of disturbance in this area from the nearby sand trader operations and from wildfowlers. To ensure that wintering bird species are not disturbed, there will be no construction works undertaken on the site between October and March. Feature breeding bird sites are outside the disturbance limits of this project.

6.2.2 The power plant development will not cause disturbance to key species of the SPA during the construction or operation phase as the project site is well outside of potential disturbance limits. The Breeding Bird Survey submitted with the ES in June 2008 noted that breeding waders are not known to breed within the proposed site and buffer zone (RSPB and NIEA *pers. comm.*). There will be no impact on any feature breeding bird species listed in the Lough Neagh SPA citation. The nearest suitable habitat is more than 2 km away.

6.3 Habitat or species fragmentation

6.3.1 There will be no habitat or species fragmentation as a result of this project.

6.4 Reduction in Species Density

6.4.1 It is unlikely that there will be a reduction in species density as a result of this project.

6.4.2 The implementation of a construction Environmental Management Plan and an operational Environmental Management System guided by PPC requirements will address any potential risk from construction and operational activities and emergency situations for this project and for the proposed power plant development. Subject to the control and monitoring by NIEA it is

considered that there is unlikely to be any direct impact to feature species from emissions and discharges; or indirect impacts due to detrimental impacts to habitat or feeding species of importance to feature species.

6.5 Changes in key indicators of conservation value

6.5.1 It is unlikely that there will be any changes in key indicators of conservation value as a result of this project. Potential impacts of the project on Natura 2000 selection features are assessed as insignificant. The justification for this reasoning for individual feature species is outlined over page in Table 6.1

Table 6.1 Potential Impacts of Project on Natura 2000 selection features

Species	Potential Impact	Justification
Bewick's Swan wintering population	Insignificant	The site is not used by Bewick's or Whooper Swans and there are no known swan fields within disturbance limits of the site.
Whooper Swan wintering population	Insignificant	
Great Crested Grebe wintering and passage population	Insignificant	<p>Construction works will not take place during the winter months. There will be no disturbance to birds during the operational phase of this project.</p> <p>The abstraction of water at this location will not impact on food supply for these species as the hard nature of the lough bed substrate in the vicinity of the abstraction point supports low densities of benthic fauna⁴</p> <p>Subject to the control and monitoring by NIEA it is considered that there is unlikely to be any direct impact to feature species from water abstraction, emissions and discharges or indirect impacts due to detrimental impacts to habitat or food sources of importance to these species</p>
Pochard wintering population	Insignificant	
Tufted Duck wintering population	Insignificant	
Scaup wintering population	Insignificant	
Goldeneye wintering population	Insignificant	
Little Grebe wintering population	Insignificant	
Assemblage species	Insignificant	
Cormorant wintering population	Insignificant	
Assemblage species	Insignificant	
Greylag Goose wintering population	Insignificant	
Assemblage species	Insignificant	
Shelduck wintering population	Insignificant	
Assemblage species	Insignificant	
Wigeon wintering population	Insignificant	
Assemblage species	Insignificant	
Gadwall wintering population	Insignificant	
Assemblage species	Insignificant	
Teal wintering population	Insignificant	
Assemblage species	Insignificant	
Mallard wintering population	Insignificant	
Assemblage species	Insignificant	
Shoveler wintering population	Insignificant	
Assemblage species	Insignificant	
Coot wintering population	Insignificant	
Assemblage species	Insignificant	
Mute Swan wintering population	Insignificant	
Assemblage species	Insignificant	
Common Tern Breeding population	Insignificant	There is no suitable breeding habitat for these species within the vicinity of the site.
Great Crested Grebe Breeding population	Insignificant	
Breeding bird assemblage: Great Crested Grebe, Gadwall, Pochard, Tufted Duck, Snipe, Redshank, Common Gull, Lesser Black-backed Gull, Black-headed Gull, Shelduck, Teal, Shoveller, Lapwing and Curlew.	Insignificant	Subject to the control and monitoring by NIEA it is considered that there is unlikely to be any direct impact to feature species from water abstraction, emissions and discharges or indirect impacts due to detrimental impacts to habitat or food sources of importance to these species

6.6 Climate change

6.5.1 Climate change may lead to changes in the food web within the lough. The lough fish community is likely to switch to increased dominance of cyprinids as waters warm⁵. Climate change is a complex issue and to identify changes that can be attributed to it requires careful monitoring of physico-chemical parameters in addition to temperature.

6.5.2 It is considered that there are no climate change issues related to this project.

⁵ Graham, C.T. & Harrod, C. (2009). Implications of Climate Change for the fishes of the British Isles. *Journal of Fish Biology* 74, 1143-1205.

7.0 DESCRIBE ANY LIKELY IMPACTS ON THE NATURA 2000 SITE AS A WHOLE IN TERMS OF INTERFERENCE WITH KEY RELATIONSHIPS THAT DEFINE THE STRUCTURE AND OR FUNCTION OF THE SITE

- 7.1 A risk to the Natura 2000 site would be the disturbance of feature species using the adjacent area of Lough Neagh during the construction process. The works will not take place between October and March to prevent disturbance to wintering birds and to avoid periods of pollan spawning and egg incubation⁴. Breeding habitat for feature bird species is outside the disturbance limits of the proposed abstraction site. It is considered that a negative impact on the feature species resulting from disturbance is extremely unlikely.
- 7.2 There is potential for the generation and run-off of silt from exposed soil into the Lough Neagh during the site works. Any deterioration in the quality of water in the lough has potential to impact on feature species. The implementation of a construction Environmental Management Plan and an operational Environmental Management System guided by PPC requirements will address any potential risk from construction and operational activities and emergency situations for this project and for the proposed power plant development. **Subject to the control and monitoring by NIEA it is considered that there is unlikely to be any direct impact to feature species from emissions and discharges; or indirect impacts due to detrimental impacts to habitat or feeding species of importance to feature species.**
- 7.3 In order to estimate the risk of entrainment, the swimming capacity of eel, pollan and roach was compared with the velocity of the water drawn into the abstraction plant. Eels > 130 mm are unlikely to be at risk of entrainment due to their swimming capacity. The benthic nature of eels of all sizes will further limit the likelihood of entrainment of this economically and conservationally important species. However, the poor swimming capacity of larval pollan and roach indicates that if present in the abstraction area, these species are at risk of entrainment. Fishes are characterised by high levels of fecundity, and the estimated numbers of larvae lost weekly to abstraction represent the annual reproductive output of <1 female roach or pollan, prior to the action of other mortality factors. The risk of entrainment of fish can be minimised

through design and the provision of suitable screening of the water intake, and this should be considered in the construction of any abstraction⁴.

8.0 PROVIDE INDICATORS OF SIGNIFICANCE AS A RESULT OF THE IDENTIFICATION OF EFFECTS SET OUT ABOVE IN TERMS OF:

8.1 Loss

8.1.1 There will be no loss of habitat within the SPA, or of habitats used by any of the feature species of the SPA.

8.2 Fragmentation

8.2.1 There will be no habitat fragmentation as a result of the project.

8.3 Disruption

8.3.1 There will be no disruption to key species as a result of the project.

8.4 Disturbance

8.4.1 There will be no disturbance to key species as a result of the project. The proposed water abstraction site is beside two sand trader operations and is in an area regularly used by wildfowlers. The construction phase will take place outside the wintering bird season. Feature species are not known to breed within the disturbance limits of the site.

8.5 Change of key elements of the site (e.g. water quality etc.)

8.5.1 Changes to water quality of Lough Neagh is considered very unlikely as a result of the proposed water abstraction facility as this will remove water from the lough, rather than add anything to it.

8.5.2 The implementation of a construction Environmental Management Plan and an operational Environmental Management System guided by PPC requirements will address any potential risk from construction and operational activities and emergency situations. Subject to the control and monitoring by NIEA it is considered that there is unlikely to be any direct impact to feature species from emissions and discharges; or indirect impacts due to detrimental impacts to habitat or feeding species of importance to feature species.

9.0 CONCLUSIONS

- 9.1 Based on the findings of this Article 6 Test of Likely Significance it is considered that there is no potential for significant negative impact on Lough Neagh SPA selection features associated with this project.

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Appendix 1

Habitats Regulations Guidance Note

The Determination of Likely Significant Effect under The Conservation (Natural Habitats &c) Regulations 1994

1. Introduction

- 1.1 Consistency in applying the requirements of the Habitats Directive, and in interpreting the Conservation (Natural Habitats &c) Regulations 1994, is important for all the country agencies in their casework on international sites. One of the key procedures is under Regulations 48-53, the consideration of plans and projects affecting the Natura 2000 series. If a plan or project is not connected with or necessary for the management of the site **and is likely to have a significant effect**, the competent authority is required to carry out an appropriate assessment to determine whether it will have an adverse effect on site integrity.
- 1.2 This note provides guidance to staff on how to decide whether or not a plan or project “is likely to have a significant effect”. It applies also to the other parts of the Conservation Regulations where the same test is used (e.g. Regulations 20, 24 & 60).
- 1.3 Only the courts can provide authoritative interpretation of the Regulations, but these notes have been developed in the light of practical experience and a close examination of the Regulations, the Habitats Directive and central government guidance, particularly PPG 9.

2. The purposes of the test of significance

- 2.1 The ‘significance’ test acts as a coarse filter for all proposed plans and projects which are not directly connected with or necessary to the management of the site (whether or not the effect is likely to be adverse or beneficial) so directing attention to those which require further assessment. The importance of the international conservation interest of the site should be at the forefront of decision-making.
- 2.2 The attached flow chart provides a step by step approach to recording a decision on likely significant effect in all cases. It includes provision for a fuller consideration to justify the decision in cases where

the qualifying feature is directly or indirectly affected but the effect is not considered likely to be significant and therefore there is no need for an appropriate assessment.

Summary of principles in judging significant effect

- The test of significant effect (‘significance test’) must be made by the ‘competent authority’, but exchange of advice between the competent authority and the country agency is strongly encouraged.
- The ‘significance test’ is a coarse filter intended to identify which proposed plans and projects require further assessment. It is the first stage of the process, and is distinct from the appropriate assessment of ‘adverse effect on integrity’ that follows (see section 1).
- Consideration of ‘likely significant effect’ will have practical and legal consequences and must be based on sound judgement and bear scientific or expert scrutiny (section 2).
- Judgements of likely significant effect should be made in relation to the features for which the European site was designated and their conservation objectives - (Regs 20, 33 and 48); judgements should be made on a case-by-case basis (section 3).
- Proposals having no, or *de minimis*, effects can be progressed without further consideration under the Habitats Regulations although reasons for reaching this decision must be justified and recorded (section 4).
- Some cases require more systematic evaluation of risk, but if a clear judgement cannot be made on the basis of available information, then an appropriate assessment will be required (section 5).
- In all cases, the reasons for reaching the judgement must be recorded by the competent authority and by the country agency when advice is given (section 6).

- 2.3 The country agencies must clearly distinguish their advice on likely significant effect, from that given on the effects on site integrity which competent authorities are

required to obtain during an appropriate assessment (Reg. 48(3)). The separate stages in this process are explained in other guidance such as PPG9, Circular 6/1995 (Scotland) and TAN5 (Wales). However, as explained in the flow chart (Annex A), there may be circumstances where a fuller, more in depth level of consideration may be needed in order to determine whether significant effects are likely.

3. Implications of the test of significance

3.1 All judgements about ‘significance’ need to be fully documented and dealt with in a systematic manner by all competent authorities including conservation agencies. A judgement that a plan or project is likely to have a significant effect can have financial implications for developers. For example it brings development which is otherwise permitted under the Town and Country Planning (General Permitted Development) Order 1995 (in England and Wales) and Town and Country Planning (General Permitted Development) (Scotland) Order, 1992 (in Scotland), under the scrutiny of the local planning authority. Conversely, the opinion (under Regulation 61(3) of the Habitats Regulations) of the country agencies that a permitted development is **not** likely to have a significant effect is conclusive and cannot be amended. Agencies will be held accountable for the advice given and will need to be able to justify decisions both for and against a ‘significant effect’.

4. Making judgements of “likely significant effect”

4.1 Likely significant effect is, in this context, any effect that may reasonably be predicted as a consequence of a plan or project that may affect the conservation objectives of the features for which the site was designated, but excluding trivial or inconsequential effects.

4.2 The likely scale of impact is important. In some cases the decision that no significant effect is likely will be obvious. Very short lived impacts would generally require only minimal further consideration under such conditions, provided there were no persistent, cumulative effects from repeated or simultaneous impacts of the same nature. Even here there will be exceptions, however. For example very brief disturbance to a seabird colony may have a lasting effect on the population (as determined by careful monitoring), even though activity may appear (through casual observation at the time) to return rapidly to normal.

4.3 At the other extreme, some cases will very clearly be likely to have a significant effect. Any proposal which would require an environmental assessment

under the Environmental Assessment Directive (85/337/EEC) (as amended) on account of its effects, among others, on a European site, can be judged as being likely to have a significant effect, although reasons for this must still be recorded. This will then require an **appropriate** assessment under the Habitats Regulations, which may be addressed by the competent authority alongside or as part of the wider environmental assessment.

4.4 In some cases the judgement about a likely significant effect will be less clear cut and it will be necessary to look particularly at the nature of the effect and its timing, duration and reversibility, taking into account any readily available information on the site, and especially its conservation objectives.

4.5 Permanent reductions in habitat area or species populations are likely to be significant unless they are very small scale. In the case of certain sites a loss of, say, a few square metres of the site area **may** not be considered significant (for example, there may be circumstances when this might apply in the case of estuarine SPAs which are selected for their bird interest), in others, such as limestone pavement, **any** further loss of the area of qualifying interest may be unacceptable. Any activity which affects the attainment of conservation objectives will probably be significant.

4.6 The following is a list of **examples** of types of effects which are likely to be significant and therefore need to be considered more fully as part of the consideration in the flow chart (Annex A). It is important to remember that they may result from either on-site or off-site activities and may need to be considered in combination with other plans or projects.

- Causing change to the coherence of the site or to the Natura 2000 series (eg presenting a barrier between isolated fragments, or reducing the ability of the site to act as a source of new colonisers);
- Causing reduction in the area of habitat or of the site;
- Causing direct or indirect change to the physical quality of the environment (including the hydrology) or habitat within the site;
- Causing ongoing disturbance to species or habitats for which the site is notified;
- Altering community structure (species composition);
- Causing direct or indirect damage to the size, characteristics or reproductive ability of populations on the site;
- Altering the vulnerability of populations etc to other impacts.

- Causing a reduction in the resilience of the feature against external change (for example its ability to respond to extremes of environmental conditions);
- Affecting restoration of a feature where this is a conservation objective.

5. When there is ‘no significant effect’

5.1. When it is clear that the plan or project is not likely to have a significant effect then only limited further consideration - to enable the reasons for reaching this decision to be justified and recorded - is required. After this, permission for the plan or project may be granted.

6. Use of evidence in judging likely significant effect

6.1 The judgement of whether a significant effect is likely should be based on the best readily available information. Where full information does not exist or is not readily available it will not usually be appropriate for further data (eg survey work) to be collected at this stage in the process although in some circumstances further information may be requested in order to clarify decision-making. Sources of information may include evidence of similar operations affecting sites with similar conservation objectives and the judgement of relevant specialists that an effect is likely, based on available evidence. However cases will always be different, and consideration must be given to the local circumstances. Early consultation between project promoters, competent authorities and country agencies is encouraged, in order that the best information can be made available to help to define the likely significance of effects.

7. Suggested process for documenting judgement of ‘likely significant effect’

7.1 Preliminary Considerations The competent authority should, with advice from the country agencies, first consider and record the features for which the site has been selected and the conservation objectives for the site. In all cases, the following should be recorded:

- What are the qualifying interest features?
- What are the conservation objectives?
- What other relevant site information is available? e.g. site (SSSI, NNR, SAC/SPA, European Marine site) management plans; list of operations which may cause damage or deterioration.

7.2 As a first step it is necessary to determine whether the proposal is connected with or necessary for the management of the site for its conservation objectives. A judgement then needs to be made as to whether to proceed to a fuller consideration or to state at this stage that an appropriate assessment is not needed (ie that there is no likely significant effect). The latter would be the case only when it was beyond doubt that the interest features would not be directly or indirectly affected.

7.3. Fuller Considerations Where there is not a clear cut case for there being no likely significant effect on the interest features or conservation objectives, you should carry out and record a brief risk assessment, e.g:

- The **potential hazards** of the plan or project and their likely consequences for the conservation objectives of the SAC/SPA features.
- For each hazard, the **probability** that the hazard will affect the SAC/SPA conservation objective in this case.
- For each hazard, the **magnitude**, likely duration and irreversibility or reversibility of the effect (recording briefly the assumptions made or evidence used in reaching that conclusion).

7.4 It may be possible to reach a decision as to whether a significant effect is likely at this stage, or you may wish to ask for further information - although not at this stage requiring an appropriate assessment. If such information is not readily available or if the results are inconclusive, then an appropriate assessment would normally be required.

7.5 The outcome of this fuller consideration should be a fully justified decision that either:

- an appropriate assessment is not needed; or
- an appropriate assessment is needed, together with some guidance on the likely scope of this assessment.

If in doubt please seek advice from the relevant country agency specialist.

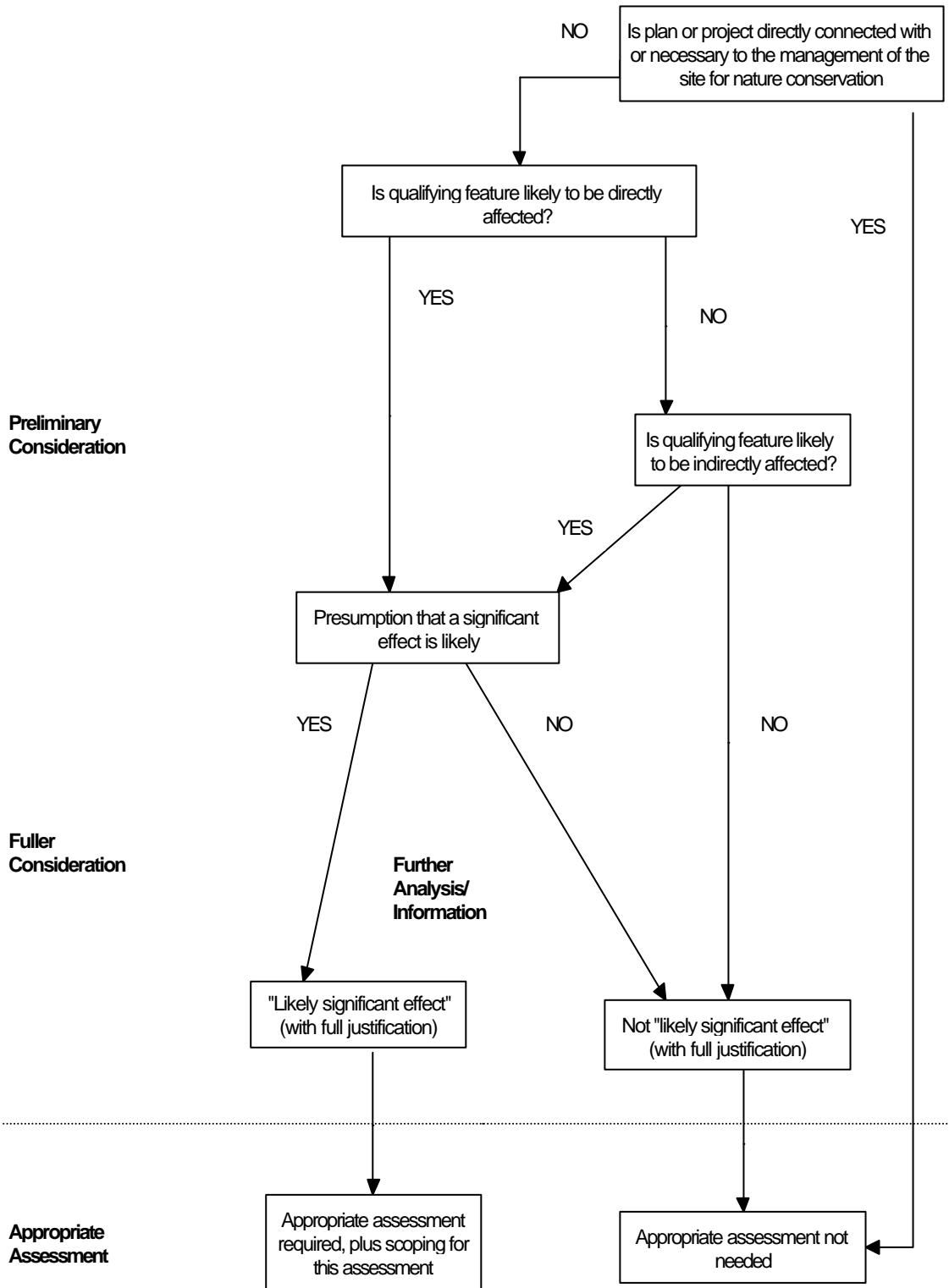
The text of this guidance note was developed by the country agencies for the Government’s inter-departmental steering group on the Habitats Directive and approved by it. It is the third in a series of guidelines which has been developed for

staff in the country agencies, but may also be useful for other competent authorities, and developers and promoters of projects to help their understanding of the key principles used in the decision making process. Further guidance notes are planned in the series which will cover the effects of plans or projects alone and in combination; adverse effect on integrity and the consideration of permitted developments affecting European sites.

The guidance notes supplement existing guidance available in PPG9 on Planning and Nature Conservation (in England) and Planning Guidance (Wales) (Planning Policy and Technical Guidance Note (Wales) 5: (Nature Conservation and Planning) and Circular 6/1995 (in Scotland).

A step-by-step approach to determining whether a significant effect is likely on a Natura 2000 site

ANNEX A



Appendix 2

Finding of no significant effects report matrix

Finding of no significant effects report matrix

Name of project or plan

Rose Energy Water Abstraction Facility and Water Pipeline

Name and location of Natura 2000 site

Lough Neagh SPA

Description of the project or plan

Water abstraction facility and water pipeline for proposed biomass fuelled power plant development

Is the project or plan directly connected with or necessary to the management of the site (provide details)?

No

Are there other projects or plans that together with the project or plan being assessed could affect the site (provide details)?

Yes – Biomss Fuelled Power Plant, Land off Ballyvannon Road, near Glenavy, County Antrim.

The assessment of significance of effects

Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site.

- o Potential for deterioration of water quality in SPA during construction.
- o Impacts of ongoing water abstraction from Lough Neagh

Explain why these effects are not considered significant.

- o The use of best working practices, the timings of the works, design and provision of suitable screening of the water intake

List of agencies consulted: provide contact name and telephone or e-mail address.

NIEA Andrew Macintosh - 08453020008

Response to consultation.

Requirement for Test of Significance.

Data collected to carry out the assessment

Who carried out the assessment?	Sources of data	Level of assessment completed	Where can the full results of the assessment be accessed and viewed?
MARENCO Environmental Consultants	NIEA, Clonaog Environmental Rose Energy Reports MARENCO Reports	Article 6 Assessment Test of Significance	Report No. 280.00/06/09/DEB