Attachment E.1.

Stage 1

Statement of Screening - Appropriate Assessment

For

Former Municipal Historic Landfill

at

Rantavan Mullagh Co. Cavan

In Line with the Requirements of Article 6(3) of the

EU Habitats Directive

Traynor Environmental Ltd.

July 2012

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BACKGROUND

An Appropriate Assessment is required where any proposed plan or project is likely to have a significant effect on any site that has been designated under the E.U. Habitats Directive, i.e. a Special Area of Conservation (SAC) or the E.U. Birds Directive, i.e. a Special Protection Area (SPA). Collectively, SAC's and SPA's are known as Natura 2000 sites.

A comprehensive assessment of the ecological impacts of the former municipal historic landfill, Rantavan, Mullagh Co. Cavan was carried out by Nevin Traynor, BSc. Env., H.Dip. I.T. of Traynor Environmental. This assessment allowed areas of potential ecological value and potential ecological constraints associated with this proposed development to be identified and it also enabled potential ecological impacts associated with the proposed development to be assessed and mitigated for.

This Statement of Screening for Appropriate Assessment is required as part of an application to the Environmental Protection Agency (EPA) for a Certification of Registration for a historic unlicensed landfill. (Section E)

There are 4 Natura 2000 sites within a 10km radius of the former municipal landfill at Rantavan, Mullagh Co Cavan.

1. Breakey Loughs (NHA 001558)

2. Killyconny Bog (Cloghbally) (SAC & NHA 000006)

3. Lough Ramor (NHA 000008)

4. River Boyne & River Blackwater (SPA 004232) & (SAC 002299)

This Natura Impact Statement screening report assesses the potential impacts of this development on these Natura 2000 sites.

REGULATORY CONTEXT

The EU Habitats Directive (92/43/EEC) gives protection to sites (Special Areas of Conservation) which support particular habitats and species listed in annexes to this directive. Articles 6(3) and 6(4) of this Directive call for the undertaking of an Appropriate Assessment for plans and projects likely to have an effect on designated sites. This is explained in greater detail in the following section.

The Birds Directive (Council Directive 79/409/EEC) implies that particular protection is given to sites (Special Protection Areas) which support certain bird species listed in Annex I of the Directive and that surveys of development sites should consider the status of such species.

The Wildlife Act 1976 (and its amendment of 2000) provides protection to most wild birds and animals. Interference with such species can only occur under licence. Under the act it is an offence to "wilfully interfere with or destroy the breeding place or resting place of any protected wild animal". The basic designation for wildlife is the Natural Heritage Area (NHA). This is an area considered important for the habitats present or which holds species of plants and animals whose habitat needs protection. Under the Wildlife Amendment Act (2000) NHAs are legally protected from damage. NHAs are not part of the Natura 2000 network and so the Appropriate Assessment process does not apply to them.

The Water Framework Directive (WFD) (2000/60/EC) which came into force in December 2000, establishes a framework for community action in the field of water policy. The WFD was transposed into Irish law by the European Communities (Water Policy) Regulations 2003 (S.I. 722 of 2003). The WFD rationalises and updates existing legislation and provides for water management on the basis of River Basin Districts (RBDs). RBDs are essentially administrative areas for coordinated water management and are comprised of multiple river basins (or catchments), with cross-border basins (i.e. those covering the territory of more than one Member State) assigned to an international RBD. The aim of the WFD is to ensure that waters achieve at least good status by 2015 and that status doesn't deteriorate in any waters.

Directive 92/43/EEC on the Conservation of Natural Habitats and Wild Fauna and Flora – the 'Habitats Directive' - provides legal protection for habitats and species of European importance. Article 2 of the Directive requires the maintenance or restoration of habitats and species of European Community interest, at a favourable conservation status. Articles 3 - 9 provide the legislative means to protect habitats and species of Community interest through the establishment and conservation of an EU-wide network of sites known as *Natura 2000*. Natura 2000 sites are Special Areas of Conservation (SACs) designated under the Habitats Directive and Special Protection Areas (SPAs) designated under the Conservation of Wild Birds Directive (79/409/EEC).

Articles 6(3) and 6(4) of the Habitats Directive sets out the decision-making tests for plans or projects affecting Natura 2000 sites. Article 6(3) establishes the requirement for Appropriate Assessment:

"Any plan or project not directly connected with or necessary to the management of the site but likely to have a 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."

Article 6(4) deals with the steps that should be taken when it is determined, as a result of appropriate assessment, that a plan/project will adversely affect a European site. Issues dealing with alternative solutions, imperative reasons of overriding public interest and compensatory measures need to be addressed in this case.

Article 6(4) states:

"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 a social or economic nature, the Member States shall take all compensatory measures necessary to ensure that the overall coherence of Natura 2000 is protected. It shall inform the Commission of the compensatory measures adopted.

Where the site concerned hosts a priority natural habitat type and/or a priority species, the only considerations which may be raised are those relating to human health or public safety, to beneficial consequences of primary importance for the environment or, further to an opinion from the Commission, to other imperative reasons of overriding public interest."

1 METHODOLOGY FOR APPROPRIATE ASSESSMENT

The aim of Appropriate Assessment is to assess the implications of a proposal in respect of a site's conservation objectives.

Appropriate Assessment is an assessment of the potential effects of a proposed plan - 'in combination' with other plans and projects - on one or more European sites. The 'Appropriate Assessment' itself is a statement which must be made by the competent authority which says whether the plan affects the integrity of a European site. The actual process of determining whether or not the plan will affect the site is also commonly referred to as 'Appropriate Assessment'.

This assessment follows the methodological guidance set out in the document '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' (2001). This document is referred to as the 'Guidance Document' in this report. These guidelines are read in conjunction with the document 'Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats' Directive 92/43/EEC' (2000). This assessment also follows the guidance given in the recent document issued by DoEHLG 'Appropriate Assessment of Plans and Projects in Ireland - Guidance for Planning Authorities' (issued December, 2009). The assessment requirements of Article 6 of the Habitat's Directive are generally dealt with in a stage by stage approach.

The EC Guidance sets out a number of principles as to how to approach decision making during the process. The primary one is 'the precautionary principle' which requires that the conservation objectives of Natura 2000 should prevail where there is uncertainty.

When considering the precautionary principle, the emphasis for assessment should be on objectively demonstrating with supporting evidence that:

- There will be no significant effects on a Natura 2000 site;
- There will be no adverse effects on the integrity of a Natura 2000 site;
- There is an absence of alternatives to the project or plan that is likely to have an adverse effect to the integrity of a Natura 2000 site; and
- There are compensation measures that maintain or enhance the overall coherence of Natura 2000.

This translates into a four stage process to assess the impacts, on a designated site or species, of a policy or proposal.

The four stages proposed by the Guidance Document are:

1.1 Stage 1: Screening (Natura Impact Statement)

The process which identifies the likely impacts upon a Natura 2000 site of a project or plan, either alone or in combination with other projects or plans, and considers whether these impacts are likely to be significant.

1.2 Stage 2: Appropriate Assessment

The consideration of the impact on the integrity of the Natura 2000 site of the project or plan, either alone or in combination with other projects or plans, with respect to the site's structure and function and its conservation objectives. Additionally, where there are adverse impacts, an assessment of the potential mitigation of those impacts.

1.3 Stage 3: Assessment of Alternative Solutions

The process which examines alternative ways of achieving the objectives of the project or plan that avoid adverse impacts on the integrity of the Natura 2000 site.

1.4 Stage 4: Assessment where Adverse Impacts Remain

An assessment of compensatory measures where, in the light of an assessment of Imperative Reasons of Overriding Public Interest (IROPI), it is deemed that the project or plan should proceed. Each stage determines whether a further stage in the process is required. If, for example, the conclusions at the end of Stage One are that there will be no significant impacts on the Natura 2000 site, there is no requirement to proceed further. It is Best Practice however to complete a 'finding of no significant effects' report. The relationship of the four stages of this Assessment Guidance is illustrated in the Guidance Document.

1.5 Methodology for this Assessment

This Appropriate Assessment covers Stage 1 only as the proposed development is not expected to have any significant adverse impacts on the integrity of the Natura 2000 sites. A Finding of No Significant Effects (FONSE) report has also been carried out and this is available in Appendix 1.

Information on the site and the area of the proposed development was studied prior to the completion of this statement. Aerial photographs and maps were examined and the websites of the National Parks and Wildlife Service (NPWS), the Environmental Protection Agency (EPA) and the National Biodiversity Data Centre were consulted for information on protected sites and the distance of these sites from the proposed development. In addition, any records of rare and protected species were noted.

2 STAGE 1 (SCREENING)

2.1 Brief Description of the Project

Mullagh historic landfill is located 1.5km from Mullagh village in the townland of Rantavan on local roadway (L-7114-0). The Site Location has a grid reference of E 268004 N 284298.

The site boundaries are marked by a local road to the Southwest. The Northern, Eastern and Southern boundaries comprise of a wooden post and wire fence and watercourse. Land to the East and South is primarily open grass land of agricultural use while the land South of the site comprises of forestry and scrubland. The surrounding land use is predominantly agricultural and forestry.

The main receptor is the groundwater and the watercourse/drain on the north-eastern aspect of the site which is immediate to the site boundary. Dwelling houses were noted on the northern, north eastern and south eastern aspect which ranged from 220 – 370 m from the site boundary. The dwellings in the area are serviced by Mullagh Public Water Supply with the exception of one dwelling which is serviced by a private well (approximately 340 m Southeast from the site boundary). The dwelling locations are shown in Drawing No. 10-198-001 (Tier 3 Assessment). The site is generally a half circle shape with a total site area of around 0.7 hectares.

It is understood that waste disposal began at the site in 1972. A variety of wastes may have been deposited, including Municipal Solid Waste (MSW) and Construction and Demolition (C&D) wastes. It is alleged that the site was used for dumping industrial waste. The site employed the method of dump and burn which was common at dump sites in the 1970s -1980s, and was finally closed in 1989.

The waste on site is covered by a thin layer of topsoil, which in some areas of the site is underlain by a layer of clay fill which ranged in thickness from 0.2m (TH16) to 1.0m (TH 10). The average thickness of this layer is 0.54m. This Clay layer was underlain by waste material which ranged in thickness from 0.4m (TH9) to 2.2m (TH9). The waste is thickest in the centre of the site, with an average thickness across the site of 1.25m. The base of the waste is defined by a layer of peat, which marks the top of the underlying natural subsoils.

The remediation works at the site will have the following objectives:-

- The primary objective is to break pollution linkage outlined in SPR Linkage No. 8;
- To reduce and /or eliminate any pollution risk associated with the site;
- Minimise risk to nearby watercourses/reduce impact;
- To reduce ground water contamination, the site has a shallow groundwater flow due to the presence of a impermeable clay underlying the site.

- To separate ground water from surface water as much as practicably possible (by preventing leachate from seeping out through the sides of the landfill);
- To improve overall appearance of the landfill;
- To provide suitable conditions for plant and other vegetation growth.

The proposed measures below have being considered for the historic landfill.

- Removal of Hazardous Wastes;
- Remediation/Removal of Contaminated Soil;
- Remediation/Removal of Contaminated Ground water;
- Remediation/Removal of Contaminated soil from base of adjacent watercourse/drain.
- Chemical and Biological Monitoring
- Capping of Mullagh Landfill
- Surface water Control and Management

SUMMARY OF MEASURES

Removal of Hazardous Wastes

Alternative Considered

The waste around trial holes 3, 6, 8, 11, 13 and 18 has been deemed hazardous. Sample results for groundwater and soil coupled with on site observations confirm the presence of hazardous waste. Leaving the waste in-situ and monitoring was not considered a feasible option given the contaminants identified in the Tier 2 Environmental Risk Assessment. (Note: - Dutch Intervention Values were exceeded in the aforementioned trial holes).

Recommended Remediation Measure

The Waste Management Section of Cavan County Council in conjunction with Traynor Environmental Ltd recommends the complete dig-out and removal of all hazardous waste in and around trial holes 3, 6, 8, 11, 13 and 18 on site.

Remediation/Removal of Contaminated Soil

Alternative Considered

- Soil can be excavated from the ground and be either treated or disposed
- Soil can be left in the ground and treated in-situ
- Soil can be left in the ground and contained to prevent the contamination from mobilising and interacting with uncontaminated areas of the site

Recommended Remediation Measure

The Waste Management Section of Cavan County Council in conjunction with Traynor Environmental Ltd recommends the complete dig-out and removal of contaminated soil around trial holes 3, 6, 8, 11, 13 and 18.

Remediation/Removal of Contaminated Ground water

Alternative Considered

- Groundwater which is deemed to be hazardous in terms of chemical and oil contamination could be removed by vacuum tanker and sent for disposal using a hazardous waste contractor.
- Groundwater which is deemed to have only oil contamination could be removed by vacuum tanker and passed through a full oil retention separator with the resultant oil sent for hazardous waste disposal. The water arising from the separator could be discharged to the watercourse/drain providing a full schedule of testing is carried out prior to discharge.
- Contaminated groundwater could be left in the ground and contained to prevent leaching and the mobilisation of contaminates.

Recommended Remediation Measure

The Waste Management Section of Cavan County Council in conjunction with Traynor Environmental Ltd recommends the pump-out and disposal of contaminated groundwater.

Remediation/Removal of Contaminated soil from base of adjacent watercourse/drain

Alternative Considered

- Watercourse/drain could be cleaned and disposed of accordingly
- Watercourse/drain could be left undisturbed and contained to prevent the mobilisation of possible contaminants
- New surface water drain could be constructed in close proximity to the existing watercourse/drain and the watercourse/drain could be left undisturbed.

Recommended Remediation Measure

The Waste Management Section of Cavan County Council in conjunction with Traynor Environmental Ltd recommends the removal of the substrate at the base of the watercourse and the disposal of same with a hazardous waste disposal company.

Chemical and Biological Monitoring

Prior to and during the course of the remediation works chemical monitoring will be carried out periodically on both surface and groundwater within the vicinity of the landfill. Surface water samples will be taken upstream, downstream and from the interaction zone of the watercourse/drain. Groundwater samples will be taken from boreholes installed up gradient and down gradient of the landfill. It is proposed to install 3 boreholes outside the waste body with one located up gradient of the site (GW1) and two located down gradient of the site (GW2 & GW3).

Capping of Mullagh Landfill

- **Re- Grading of Landform**

The re-grading of the landform is vital to the overall remediation of the site and will break the infiltration of rainfall into the waste body. This re-grading will take place with what ever combination of remediation options are carried out.

- **Capping**

Capping of the landfill with a suitable capping layer will result in a significant reduction in the amount of leachate generated within the site whilst allowing sufficient moisture to penetrate in order to maintain the decomposition process.

- **Low Permeability layer**

The main function of this layer is the control of leachate generation by minimising the infiltration of water into the underlying waste. This layer should consist of a material which can be compacted to a suitably low hydraulic conductivity which prevents most, but not all, of the moisture infiltrating into the waste.

- **Subsoil**

In addition to the low permeability layer a 400mm subsoil layer would be required across the capping layer in order to protect the low permeability layer and to help support vegetation. A loamy and relatively stone-free soil could be used for this layer.

- **Topsoil or Similar Layer**

This layer is necessary to provide a foundation into which grass and any other vegetation might be planted. The topsoil or similar product should be uniform and have a minimum slope of 1 to 30 prevent surface water ponding.

- **Tree Planting and Final Landscaping**

The landfill at Mullagh could be planted with a suitable mix of trees to ensure the establishment of a good sustained vegetative cover and aid the integration of the landfill into the landscape.

Surface water Control and Management

The capping and regarding of the landfill will reduce the infiltration of precipitation into the waste body and promote surface water run-off and drainage to the watercourse/drain on the North-eastern aspect of the landfill. This will prevent the interaction of clean precipitation with the waste body, minimise the generation of leachate and limit the recharge of shallow groundwater flow.

2.2 Brief Description of the Natura 2000 Sites

The Mullagh Landfill site is located within 10km of four Natura 2000 sites:

1. Breakey Loughs (NHA 001558)

2. Killyconny Bog (Cloghbally) (SAC & NHA 000006)

3. Lough Ramor (NHA 000008)

4. River Boyne & River Blackwater (SPA 004232) & (SAC 002299)

Table 2.1 summarises the characteristics of each site and Figure 2.1 & 2.2 shows the location of these designated sites in relation to the former municipal landfill site.

Figure 2.1 Location of 4 Designated Sites

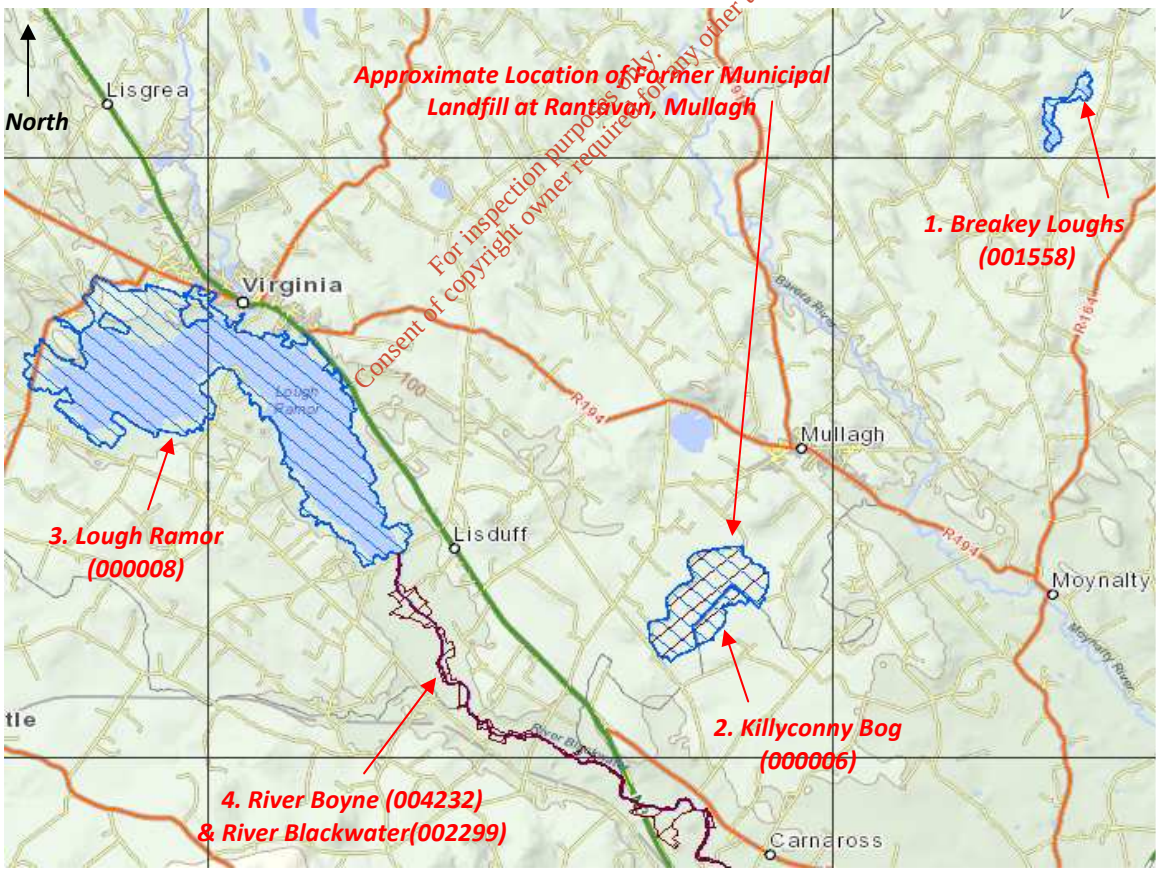
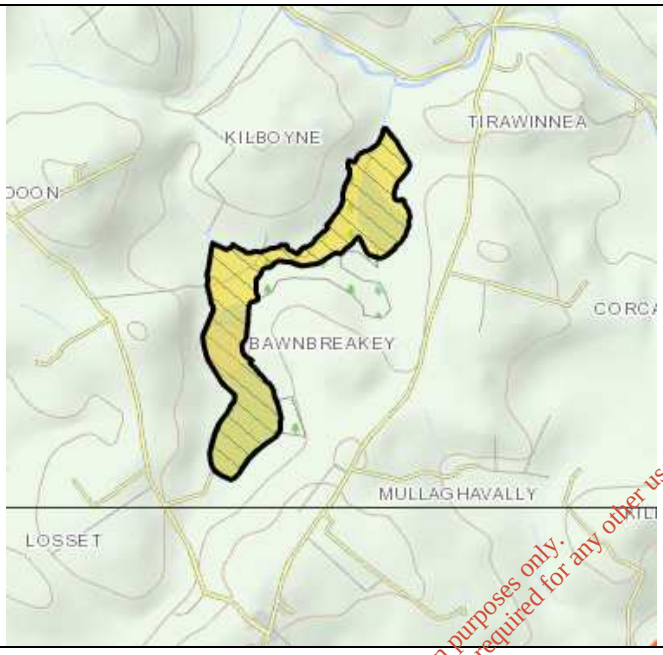
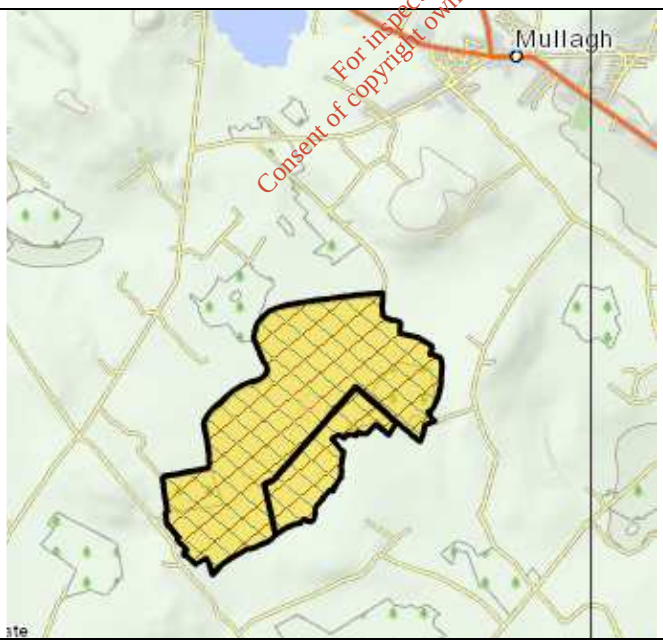


Figure 2.2 Individual location maps of Designated Sites

	Breakey Loughs (NHA 001558)
	Killyconny Bog (Cloghbally) (SAC & NHA 000006)

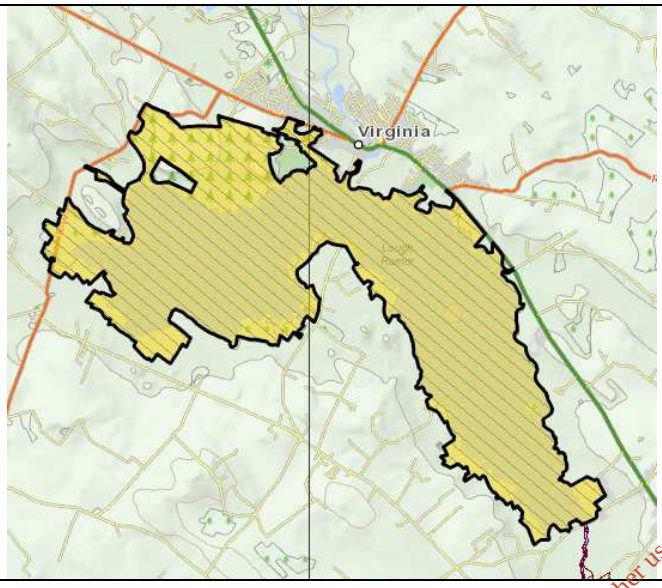
	Lough Ramor (NHA 000008)
	River Boyne & River Blackwater (SPA 004232) & (SAC 002299)

Table 2.1 Summarises the characteristics of each site.

Designated Site	Site Code	Description	Distance from site (km)
Breakey Loughs	001558 pNHA	Breakey Loughs is one of the larger lakes and associated wetland systems in this locality. Breakey Loughs is a Natural Heritage Area (NHA) located south-west of Kingscourt. It comprises two small lakes separated by freshwater marsh, wet woodland, cutover bog and wet grassland. The marginal grassland is used for grazing cattle. The freshwater lakes and adjacent woodland provides suitable cover for nesting birds. Its natural character and lack of disturbance make it attractive to waterfowl. Although no rare plants are recorded here, there is an excellent variety of species for such a small area and the site is of local importance as a refuge for species which are representative of these habitats. Current management appears to be appropriate and the site has not been modified by any serious damaging factors.	8
KillyconnyBog (Cloghbally)	000006 SAC & pNHA	Killyconny Bog is a rather small raised bog of approximately 191 hectares site located in the north-east of the country. The site contains good examples of the priority Annex I habitat active raised bog and the non-priority habitat degraded raised bog (capable of regeneration). The site comprises a core of uncut high bog occurring as two distinct lobes, joined by a narrow strip of bog. This intact area is surrounded by cutover raised bog surfaces. The uncut high bog dome covers an area of approximately 85 hectares (Derwin et al., 2002) and contains a well developed raised bog flora. The uncut high bog area is surrounded by extensive cutover surfaces and a portion of this cutover has been planted with conifers. Although the site is rather damaged at present due to drainage effects, it remains one of the largest extant areas of relatively intact raised bog in the north-east of the country and thus is of considerable ecological and biogeographical importance. This site is especially vulnerable to the effects of peat cutting and drainage which are causing water loss and an overall deterioration in habitat quality. The cutover margins are vulnerable to agricultural reclamation.	0.8

Designated Site	Site Code	Description	Distance from site (km)
River Boyne and River Blackwater	002299 SAC	This site comprises most of the freshwater element of the River Boyne from upriver of the Boyne Aqueduct at Drogheda, the Blackwater River as far as Lough Ramor and the principal Boyne tributaries, notably the Deel, Stoneyford and Tremblestown Rivers. This system drains a considerable area of counties Meath, Westmeath and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. The rivers flow through a landscape dominated by intensive agriculture, mostly of improved grassland but also cereals. Much of the river channels were subject to arterial drainage schemes in the past. Natural flood-plains now exist along only limited stretches of river, though often there is a fringe of reed swamp, freshwater marsh, wet grassland or deciduous wet woodland. Along some parts, notably between Drogheda and Slane, are stands of tall, mature mixed woodland. Substantial areas of improved grassland and arable land are included in site for water quality reasons. There are many medium to large sized towns adjacent to but not within the site.	4.8
	004232 SPA	The River Boyne and River Blackwater SPA is a long linear site that comprises stretches of the River Boyne and several of its tributaries: most of the site is in Co Meath but it extends also into Counties Cavan, Louth and Westmeath. It includes the following river sections: The River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co Cavan; the Tremblestown River (and Athboy River) from the junction with the River Boyne at Kilnagross Bridge to the bridge in Athboy, Co Meath; the Stoneyford River from its junction with the River Boyne to Stonestone Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co.Westmeath. The site includes the river channel and marginal vegetation.	

Designated Site	Site Code	Description	Distance from site (km)
Lough Ramor	000008 pNHA	Lough Ramor lies in a hollow in the Silurian strata that covers most of east Cavan. Much of the shore is wooded naturally with alder, willow and hazel. Marshes exist in many places around the shore but extensive reed beds stretching out into the lake are rare. The islands are usually covered by willows but in more open places black-headed gulls nest. The plant communities along the lake margins are of note and, combined with the over-wintering bird numbers, make Lough Ramor an important wetland site.	5

3 ASSESSMENT CRITERIA

3.1 Description of the elements of the project likely to give rise to impact on Natura 2000 Sites

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 main elements of the project that could potentially impact on Natura 2000 sites are shown in Table 3.1.The potential impacts occur primarily during the waste removal phase of the project.

The likely impacts are discussed in further detail in Section 3.2.

Table 3.1: The Main Elements of the Project and their Potential Impacts on Natura 2000 Sites

Project Element	Potential Impact on Natura 2000 Sites	
Vegetation removal from the existing landfill cap.	- This will not effect Natura 2000 Sites due to their distance away from the development site.	Killyconny Bog (Cloghbally) 000006 - SAC & pNHA River Boyne and River Blackwater 002299 SAC, 004232 SPA
Removal of hazardous waste and Construction of new landfill cap, including spreading of topsoil.	- hydrological impacts such as contaminated runoff and increased siltation (mortalities of aquatic flora & fauna)	Killyconny Bog (Cloghbally) 000006 - SAC & pNHA River Boyne and River Blackwater 002299 SAC, 004232 SPA

3.2 Description of the likely impact of the project on Natura 2000 Sites

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 by virtue of:

Size and Scale
Mullagh historic landfill is located 1.5km from Mullagh village in the townland of Rantavan on local roadway (L-7114-0). The site boundary associated with Mullagh Landfill covers an area of approximately 0.7 hectares. The River Boyne and River Blackwater SAC (002299) & SPA (004232) cover a large catchment area of 2320.86 hectares. The closest designated site to the Mullagh landfill site is Killyconny Bog (Cloghbally) (SAC & NHA 000006) which covers considerably less at 191.22 hectares. The area associated with Lough Ramor pNHA (000008) is approximately 800 hectares. The smallest of the designated sights located within 10km of Mullagh landfill is Breakey Loughs pNHA (001558) which cover an area of approximately 14 hectares.
Land Take
There will be no land take as a result of the proposed remediation and removal works to be carried out at the Mullagh Landfill site.

Distance from Natura 2000 sites or key features of the site
Table 2.1 displays the distance of the Natura 2000 sites from Mullagh Landfill site. There are no potential impacts on these sites in terms of habitat loss and disturbance to key species. The Mullagh Landfill site is located within 10km of four Natura 2000 sites: 1. Breakey Loughs (NHA 001558) - 8.0km 2. Killyconny Bog (Cloghbally) (SAC & NHA 000006) - 0.8km 3. Lough Ramor (NHA 000008) - 5.0km 4. River Boyne & River Blackwater (SPA 004232) & (SAC 002299) - 4.8km
Excavation and Resource requirements (water abstraction etc.)
There will be no excavation or resource requirements from any Natura 2000 site as a result of the proposed development. Soil for the new cap and construction materials will be predominantly sourced off site and will be transported to the landfill site by public road by licensed contractors. There may be a portion of drain water extracted from the drain adjacent to the site but disturbance will be kept to a minimum. This abstraction will not affect the SPA or SAC in the locality.
Emissions (disposal to land, water or air)
There will be no emissions to the surrounding watercourses as a result of the proposed rehabilitation works. Conversely, following the installation of the new cap, the soil cover and sub-surface stone drainage layer will greatly reduce the quantities of leachate generated at the site and will therefore enhance the water quality draining from the site to the near by SPA and cSAC. It is possible that there may be some run-off of top-soil from the new cap following its installation. However the new cap will be installed during the dryer summer months and will immediately be re-planted/re-seeded in order to promote the stabilisation of the soil. Any construction waste will be disposed of at licensed disposal sites and will not impact on any Natura 2000 sites.
Transportation requirements
The remediation and removal works to take place on the site will involve small scale traffic movements with vehicles delivering and removing materials to the development site. This increase in traffic will be temporary and the no major haulage routes cross the Natura 2000 sites. There will be no significant impacts to the cSAC's ,SPA's or pNHA's as a result of the transportation requirements for the proposed development.
Duration of construction, operation, decommissioning etc.
It is estimated that the duration of construction of the new cap will be approximately 4-6 months and the construction activities are planned to take place in the summer months (April to September inclusive). The timing of the construction works is such that it avoids the bird nesting season Following the installation of the new cap, the soil cover and sub-surface stone drainage layer will greatly reduce the quantities of leachate generated at the site and will therefore be predicted to enhance the water quality in the adjacent SPA and cSAC. It is proposed that the new cap will be permanent and there are no current plans for any future replacement of the cap.

3.3 Description of the likely changes to the Site

Describe any likely changes to the site arising as a result of:

- *reduction of habitat area*
- *disturbance to key species*
- *habitat or species fragmentation*
- *reduction in species density*
- *changes in key indicators of conservation value (water quality etc)*

Reduction in habitat area
The land-take associated with the proposed rehabilitation works is extremely small in proportion to the area of Mullagh Landfill site already modified, having been capped in the 1980's. The landfill site and the habitats here are terrestrial, mainly grassland and scrub, and do not contain any of the key habitats for which the cSAC located 0.8km away was designated. The proposed re-capping works will comprise the stripping of vegetation from this area and the introduction of new top-soil layer. The area will immediately be re-planted/re-seeded and is likely to retain a similar character to it's previously capped state. There will be no loss of protected habitats as a result of the proposed works.
Disturbance to key species
For the Breakey Loughs pNHA – 001558 no rare plants were recorded here, although there is an excellent variety of species for such a small area and the site is of local importance as a refuge for species which are representative of these habitats. The KillyconnyBog (Cloghbally) 000006 - SAC & pNHA site contains good examples of the priority Annex I habitat active raised bog and the non-priority habitat degraded raised bog (capable of regeneration). The uncut high bog area is surrounded by extensive cutover surfaces and a portion of this cutover has been planted with conifers. The key species identified are Rana temporaria, Sphagnum imbricatum, Sphagnum fuscum. The key species for which the site is designated are; 7110 Active raised bogs, 7120 Degraded raised bogs still capable of natural regeneration (listed on Annex II of the E.U. Habitats Directive). There will be no loss of key protected habitats and species from any of the four designated sites as a result of the proposed works as no key protected habitats occur on the landfill site. There will be no disturbance to key habitats or species in the nearest cSAC as a result of the proposed development as there are no predicted negative impacts to water quality in the cSAC as a result of the re-capping of the landfill site.
Habitat or species fragmentation
No habitat or species fragmentation will occur in any of the Natura 2000 sites located near the development site. Mullagh landfill site is located approximately 0.8km from the closest Natura 2000 site and the habitats here have already been modified by the operation and subsequent capping of the landfill site in the 1980's. The habitats on Mullagh landfill site are of low ecological value and they do not contribute to the conservation value of the Natura 2000 sites.
Reduction in species density
There will be no reduction in species density at any of the Natura 2000 sites as a result of the re-capping of the landfill site. The habitats on the site are of low ecological value and are not classified as key habitats. Therefore the alteration of these habitats to facilitate the new landfill cap will not result in a reduction in floral species diversity in the KillyconnyBog (Cloghbally) SAC & pNHA which is located closest to the site.The proposed development is not expected to have any impacts on the protected flora and fauna in the cSAC as there will be no reduction in water quality as a result of the installation of the new landfill cap. Conversely, following the installation of the new cap, the soil cover and sub-

surface stone drainage layer will greatly reduce the quantities of leachate generated at the site and may therefore enhance the water quality in the cSAC.
Changes in key indicators of conservation value (water quality etc.)
It is not expected that there will be any changes to the key indicators of conservation value of any of the four Natura 2000 sites as a result of the proposed development. No loss of protected habitats or species will occur and no reduction of water quality in the Natura 2000 sites is expected.

3.4 The likely Impacts on the Natura 2000 Site as a whole

Describe any likely impacts on the Natura 2000 site as a whole in terms of:

- Interference with the key relationships that define the structure of the site;

- Interference with key relationships that define the function of the site.

It is not considered likely that there will be any impacts on the key relationships that define the structure or function of the Natura 2000 sites considered in this Natura Impact Statement.

There will be no loss or degradation of protected habitats at any of the Natura 2000 sites as a result of the proposed development. No reduction in water quality is expected as a result of the proposed development.

3.4.1 Indicators of Significance of these Impacts

Provide indicators of significance as a result of the identification of effects set out above in terms of:

- disturbance
- loss
- fragmentation
- disruption
- change to key elements of the site (e.g. water quality etc.)

3.4.2 The likely Significance of the Potential Impacts

This Statement of Screening for Appropriate Assessment has established that with proper mitigation, there will be no potential for significant impacts from this proposed development on the Natura 2000 sites identified and that it can be allowed to proceed as planned. The conservation objectives and the integrity of this site and the species associated with it will not be affected. Therefore, a full Appropriate Assessment (Stage 2) is not required.

4 REFERENCES

The Wildlife Act 1976 (and its amendment of 2000)

Directive 92/43/EEC.
European Commission Directorate-General. Oxford.
European Commission. 2000. Managing Natura 2000 sites: The provisions of Article 6 of the 'Habitats'

The Water Framework Directive (WFD) (2000/60/EC),

www.npws.ie

European Commission Directorate-General. 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

www.epa.ie

APPENDIX 1

Finding of No Significant Effects Report

Finding of no Significant Effects Report	
Name and location of the Natura 2000sites	- Breakey Loughs (NHA 001558) - Killyconny Bog (Cloghbally) (SAC & NHA 000006) - Lough Ramor (NHA 000008) - River Boyne & River Blackwater (SPA 004232) & (SAC 002299)
Description of the project or plan	It is the aim of Cavan County Council to under take remediation works at the Mullagh Land fill site, with the objective of improving the environmental safety of the site and its immediate environs. **The proposed measures below have being considered for the historic landfill.** - Removal of Hazardous Wastes; - Remediation/Removal of Contaminated Soil; - Remediation/Removal of Contaminated Ground water; - Remediation/Removal of Contaminated soil from base of adjacent watercourse/drain. – Chemical and Biological Monitoring – Capping of Mullagh Landfill - Surface water Control and Management
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 of plan being assessed could affect the site (provide details)?	No
The Assessment of significant Effects	
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 site	It is not expected that there will be any significant impacts to the Natura 2000 sites as a result of the remediation and removal of waste from the former Municipal and Landfill at Mullagh.
Explain why these effects are not considered significant	The distance of the Natura 2000 Sites from the former Landfill coupled with the proposed remediation and control measures would limit any significant effects on the protected sites.

Name of Agency or Body Consulted		**Summary of Response**	
Waste Management Section, Cavan County Council (Mr David Barry B.Sc, M.Sc. Environmental Scientist)		A number of formal consultations were held with Mr David Barry of the Waste Management Section between 2009 and 2010	
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
This Natura Impact Statement was completed by Traynor Environmental Ltd.	Environmental Assessment report (FTC, 2009) The NPWS designated site synopses were used and the locations of the Natura 2000 sites were obtained from NPWS (Sept, 2010)	Environmental Assessment and a source-pathway receptor (S-P-R) Risk Assessment	The Environmental Assessment is available from Cavan County Council.

Overall Conclusions

It is not considered likely that there will be any impacts on the designated sites covered by this report. These are:

1. Breakey Loughs (NHA 001558)

2. Killyconny Bog (Cloghbally) (SAC & NHA 000006)

3. Lough Ramor (NHA 000008)

4. River Boyne & River Blackwater (SPA 004232) & (SAC 002299)

Therefore an Appropriate Assessment (Stage 2) is not required for these Natura 2000 sites.

APPENDIX 2

NPWS Site Synopses

SITE NAME: BREAKEY LOUGHS

SITE CODE: 001558

Breakey Loughs is a Natural Heritage Area (NHA) located 7km south-west of Kingscourt, in Co. Meath. It comprises two small lakes separated by freshwater marsh, wet woodland, cutover bog and wet grassland. The marginal grassland is used for grazing cattle.

The freshwater lakes and adjacent woodland provide suitable cover for nesting birds. Its natural character and lack of disturbance make it attractive to waterfowl. Breakey Loughs is one of the larger lakes and associated wetland systems in this locality. Although no rare plants are recorded here, there is an excellent variety of species for such a small area and the site is of local importance as a refuge for species which are representative of these habitats. Current management appears to be appropriate and the site has not been modified by any serious damaging factors.

SITE NAME: LOUGH RAMOR

SITE CODE: 000008

Lough Ramor lies in a hollow in the Silurian strata that cover most of eastern Cavan.

It is a very shallow lake with a pH of about 7.5 and a maximum depth of 6m. The water is nutritionally poor but suffers periodic enrichment, resulting in algal blooms. Being situated on a different rock type than the other Cavan lakes it differs also in appearance. Much of the shore has semi-natural woodland of Alder (Alnus glutinosa), willows (Salix spp.) and Hazel (Corylus avellana), those stands near Virginia being originally planted.

Hazel and Hawthorn (Crataegus monogyna) scrub is widespread on relatively dry sites with Bramble (Rubus fruticosus), False Brome (Brachypodium sylvaticum), Wood-sedge (Carex sylvatica), Common Dog-violet (Viola riviniana) and Primrose (Primula vulgaris). Where such communities occur on a rocky shore Crab Apple (Malus sylvestris) often grows with roses (Rosa spp.) and Heath Dog-violet (Viola canina). The scrub grades into woodland in several places on the southern shore and here Ash (Fraxinus excelsior) and oak (Quercus spp.) occur with some Holly (Ilex aquifolium). The bird community in such sites includes Treecreeper, Long-tailed Tit, Chiffchaff, Willow Warbler and, locally, Blackcap. Woodpigeon, Sparrowhawk, Jay, Pheasant and Woodcock are also found.

The islands are mostly covered by willows and in more open places Black-headed Gulls nest. Mallard, Teal and Red-breasted Merganser breed on the island while Great Crested Grebe largely use the mainland shores of the lake.

Freshwater marshes exist in many places around the shore but extensive reedbeds tretching out into the lake are rare. The margins of the marshes are mostly sedgedominated by such species as Bottle Sedge (Carex rostrata), Bladder-sedge (C. vesicaria), Tufted-sedge (C. lata), Common Sedge (C. nigra) and occasionally Water Sedge (C. aquatilis). Water Horsetail Equisetum fluviatile), Marsh Cinquefoil (Potentilla palustris) and bur-reeds (Sparganium spp.) also occur commonly. Also on the fringes occurs a more varied community characteristic of base-poor areas, with such species as Marsh Ragwort (Senecio aquaticus), Lesser Spearwort (Ranunculus flammula), Devil's-bit Scabious (Succisa pratensis), Common Marsh-bedstraw (Galium palustre), Hoary Willowherb (Epilobium parviflorum), Creeping Bent (Agrostis stolonifera), Sweet Vernal-grass (Anthoxanthum odoratum), Yorkshire-fog (Holcus lanatus) and Purple Moor-grass (Molinia caerulea). Cuckooflower (Cardamine pratensis) occurs commonly and Marsh Violet (Viola palustris) and Greater Spearwort (Ranunculus lingua) are to be found in places.

Stretches of the shore with muddy or stony substrates provide niches for Trifid Burmarigold

(Bidens tripartita) and the scarce Tasteless Water-pepper (Persicaria mitis) and Small Water-pepper (Persicaria minor). The lake supports nationally important numbers of Cormorant (average maximum of 201) and notable concentrations of Whooper Swan, Wigeon, Teal, Mallard and Lapwing. Snipe, Lapwing and Curlew also nest in the fringing marshes.

The plant communities along the lake margins are of note and, combined with the over-wintering bird numbers, make Lough Ramor an important wetland site.

SITE NAME: RIVER BOYNE AND RIVER BLACKWATER SPA

SITE CODE: 004232

The River Boyne and River Blackwater SPA is a long, linear site that comprises stretches of the River Boyne and several of its tributaries; most of the site is in Co. Meath, but it extends also into Cos Cavan, Louth and Westmeath. It includes the following river sections: the River Boyne from the M1 motorway bridge, west of Drogheda, to the junction with the Royal Canal, west of Longwood, Co Meath; the River Blackwater from its junction with the River Boyne in Navan to the junction with Lough Ramor in Co. Cavan; the Tremblestown River/Athboy River from the junction with the River Boyne at Kilnagross Bridge west of Trim to the bridge in Athboy, Co. Meath; the Stoneyford River from its junction with the River Boyne to Stonestown Bridge in Co. Westmeath; the River Deel from its junction with the River Boyne to Cummer Bridge, Co. Westmeath. The site includes the river channel and marginal vegetation.

Most of the site is underlain by Carboniferous limestone but Silurian quartzite also occurs in the vicinity of Kells and Carboniferous shales and sandstones close to Trim.

The site is a Special Protection Area (SPA) under the E.U. Birds Directive of special conservation interest for the following species: Kingfisher.

A survey in 2010 recorded 19 pairs of Kingfisher (based on 15 probable and 4 possible territories) in the River Boyne and River Blackwater SPA. A survey conducted in 2008 recorded 20-22 Kingfisher territories within the SPA. Other species which occur within the site include Mute Swan (90), Teal (166), Mallard (219), Cormorant (36), Grey Heron (44), Moorhen (84), Snipe (32) and Sand Martin (553) – all figures are peak counts recorded during the 2010 survey.

The River Boyne and River Blackwater Special Protection Area is of high ornithological importance as it supports a nationally important population of Kingfisher, a species that is listed on Annex I of the E.U. Birds Directive.

SITE NAME: RIVER BOYNE AND RIVER BLACKWATER

SITE CODE: 002299

This site comprises the freshwater element of the River Boyne as far as the Boyne Aqueduct, the Blackwater as far as Lough Ramor and the Boyne tributaries including the Deel, Stoneyford and Tremblestown Rivers. These riverine stretches drain a considerable area of Meath and Westmeath and smaller areas of Cavan and Louth. The underlying geology is Carboniferous Limestone for the most part with areas of Upper, Lower and Middle well represented. In the vicinity of Kells Silurian Quartzite is present while close to Trim are Carboniferous Shales and Sandstones. There are many large towns adjacent to but not within the site. Towns both small and large, include Slane, Navan, Kells, Trim, Athboy and Ballivor.

The site is a candidate SAC selected for alkaline fen and alluvial woodlands, both habitats listed on Annex I of the E.U. Habitats Directive. The site is also selected for the following species listed on Annex II of the same directive – Atlantic Salmon, Otter and River Lamprey.

The main areas of alkaline fen are concentrated in the vicinity of Lough Shesk, Freehan Lough and Newtown Lough. The hummocky nature of the local terrain produces frequent springs and seepages which are rich in lime. A series of base-rich marshes have developed in the poorly-drained hollows, generally linked with these three lakes. Open water is usually fringed by Bulrush (Typha latifolia), Common Club-rush (Scirpus lacustris) or Common Reed (Phragmites australis) and this last species also extends shorewards where a dense stand of Great Fen Sedge or Saw Sedge (Cladium mariscus) frequently occurs. This in turn grades into a sedge and grass community (Carex spp., Molinia caerulea) or one dominated by the Black Bogrush (Schoenus nigricans). An alternative direction for the aquatic/terrestrial transition to take is through a floating layer of vegetation. This is normally based on Bogbean (Menyanthes trifoliata) and Marsh cinquefoil (Potentilla palustris). Other species gradually become established on this cover, especially plants tolerant of low nutrient status e.g. bog mosses (Sphagnum spp.). Diversity of plant and animal life is high in the fen and the flora, includes

many rarities. The plants of interest include Narrow-leaved Marsh Orchid (Dactylorhiza traunsteineri), Fen Bedstraw (Galium uliginosum), Cowbane (Cicuta virosa), Frogbit (Hydrocharis morsus-ranae) and Least Bur-reed (Sparganium minimum). These species tend to be restricted in their distribution in Ireland. Also notable is the abundance of aquatic Stoneworts (Chara spp.) which are characteristic of calcareous wetlands.

The rare plant, Round-leaved Wintergreen (Pyrola rotundifolia) occurs around Newtown Lough. This species is listed in the Red Data Book and is protected under the Flora Protection Order, 1999, and this site is its only occurrence in Co. Meath. Wet woodland fringes many stretches of the Boyne. The Boyne River Islands are a small chain of three islands situated 2.5 km west of Drogheda. The islands were formed by the build up of alluvial sediment in this part of the river where water movement is sluggish. All of the islands are covered by dense thickets of wet, Willow (Salix spp.) woodland, with the following species occurring: Osier (S. viminalis), Crack Willow (S. fragilis), White Willow (S. alba), Purple Willow (Salix

purpurea) and Grey Willow (S. cinerea). A small area of Alder (Alnus glutinosa) woodland is found on soft ground at the edge of the canal in the north-western section of the islands. Along other stretches of the rivers of the site Grey Willow scrub and pockets of wet woodland dominated by Alder have become established, particularly at the river edge of mature deciduous woodland. Ash (Fraxinus excelsior) and Birch (Betula pubescens) are common in the latter and the ground flora is typical of wet woodland with Meadowsweet (Filipendula ulmaria), Angelica (Angelica sylvestris), Yellow Iris, Horsetail (Equisetum spp.) and occasional tussocks of Greater Tussocksedge (Carex paniculata).

The dominant habitat along the edges of the river is freshwater marsh - the following plant species occur commonly here: Yellow Flag (Iris pseudacorus), Creeping Bent (Agrostis stolonifera), Canary Reed-grass (Phalaris arundinacea), Marsh Bedstraw (Galium palustre), Water Mint (Mentha aquatica) and Water Forget-me-not (Myosotis scorpioides). In the wetter areas of the marsh Common Meadow-rue (Thalictrum flavum) is found. In the vicinity of Dowth, Fen Bedstraw (Galium uliginosum), a scarce species mainly confined to marshy areas in the midlands, is common in this vegetation. Swamp Meadow-grass (Poa palustris) is an introduced plant which has spread into the wild (naturalised) along the Boyne approximately 5 km south-west of Slane. It is a rare species which is listed in the Red Data Book and has been recorded among freshwater marsh vegetation on the banks of the Boyne in this site. The only other record for this species in the Republic is from a site in Co. Monaghan.

The secondary habitat associated with the marsh is wet grassland and species such as Tall Fescue (Festuca arundinacea), Silverweed (Potentilla anserina), Creeping Buttercup Ranunculus repens), Meadowsweet (Filipendula ulmaria) and Meadow Vetchling (Lathyrus pratensis) are well represented. Strawberry Clover (Trifolium fragiferum), a plant generally restricted to coastal locations in Ireland, has been recorded from wet grassland vegetation at Trim. At Rossnaree river bank on the River Boyne, is Round-Fruited Rush (Juncus ompressus) found in alluvial pasture, which is generally periodically flooded during the winter months. This rare plant is only found in three counties in Ireland.

Along much of the Boyne and along tributary stretches are areas of mature deciduous woodland on the steeper slopes above the floodplain marsh or wet woodland vegetation. Many of these are planted in origin. However the steeper areas of King Williams Glen and Townley Hall wood have been left unmanaged and now have a more natural character. East of Curley Hole the woodland has a natural appearance with few conifers. Broad-leaved species include Oak (Quercus spp.), Ash (Fraxinus excelsior), Willows, Hazel (Corylus avellana), Sycamore (Acer pseudoplatanus), Holly (Ilex aquifolium), Horse chestnut (Aesculus sp.) and the shrubs Hawthorn (Crataegus monogyna), Blackthorn (Prunus spinosa) and Elder (Sambucus nigra). South-west of Slane and in Dowth, the addition of some more exotic tree species such as Wych Elm (Ulmus glabra), Beech (Fagus sylvatica), and occasionally Lime (Tilia cordata), are seen. Coniferous trees, Larch (Larix sp.) and Scots Pine (Pinus sylvestris) also occur. The woodland ground flora includes Barren Strawberry (Potentilla sterilis), Enchanter's Nightshade (Circaea lutetiana) and Ground-ivy (Glechoma hederacea), along with a range of ferns. Variation occurs in the composition of the canopy, for example, in wet patches alongside the river, White Willow and Alder form the canopy.

Other habitats present along the Boyne and Blackwater include lowland dry grassland, improved grassland, reedswamp, weedy wasteground areas, scrub, hedge, drainage ditches and canal. In the vicinity of Lough Shesk, the dry slopes of the morainic hummocks support grassland vegetation which, in some places, is partially colonised by Gorse (Ulex europaeus) scrub. Those grasslands which remain unimproved for pasture are species-rich with Common Knapweed (Centaurea nigra), Creeping Thistle (Cirsium arvense) and Ribwort Plantain (Plantago lanceolata) commonly present. Fringing the canal alongside the Boyne south-west of Slane, are Reed Sweet-grass (Glyceria maxima), Great Willowherb (Epilobium hirsutum) and Meadowsweet.

The Boyne and its tributaries is one of Ireland's premier game fisheries and it offers a wide range of angling from fishing for spring salmon and grilse to seatrout fishing and extensive brown trout fishing. Atlantic Salmon (Salmo salar) use the tributaries and headwaters as spawning grounds. Although this species is still fished commercially in Ireland, it is considered to be endangered or locally threatened elsewhere in Europe and is listed on Annex II of the Habitats Directive. Atlantic Salmon run the Boyne almost every month of the year. The Boyne is most important as it represents an eastern river which holds large three-sea-winter fish from 20 –30 lb. These fish generally arrive in February with smaller spring fish (10 lb) arriving in April/May. The grilse come in July, water permitting. The river gets a further run of fish in late August and this run would appear to last well after the fishing season. The salmon fishing season lasts from 1st March to 30th September.

The Blackwater is a medium sized limestone river which is still recovering from the effects of the arterial drainage scheme of the 70's. Salmon stocks have not recovered to the numbers pre drainage. The Deel, Riverstown, Stoneyford and Tremblestown Rivers are all spring fed with a continuous high volume of water. They are difficult to fish in that some are overgrown while others have been affected by drainage with the resulting high banks.

The site is also important for the populations of two other species listed on Annex II of the E.U. Habitats Directive, namely River Lamprey (Lampetra fluviatilis) which is present in the lower reaches of the Boyne River while the Otter (Lutra lutra) can be found throughout the site. In addition, the site also supports many more of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger and Irish Hare. Common Frog, another Red Data Book species, also occurs within the site. All of these animals with the addition of the Stoat and Red Squirrel, which also occur within the site, are protected under the Wildlife Act.

Whooper Swans winter regularly at several locations along the Boyne and Blackwater Rivers. Parts of these areas are within the cSAC site. Known sites are at Newgrange (c. 20 in recent winters), near Slane (20+ in recent winters), Wilkinstown (several records of 100+) and River Blackwater from Kells to Navan (104 at Kells in winter 1996/97, 182 at Headfort in winter 1997/98, 200-300 in winter 1999/00). The available information indicates that there is a regular wintering population of Whooper Swans based along the Boyne and Blackwater River valleys. The birds use a range of feeding sites but roosting sites are not well known. The population is substantial, certainly of national, and at times international, importance. Numbers are probably in the low hundreds.

Intensive agriculture is the main landuse along the site. Much of the grassland is invery large fields and is improved. Silage harvesting is carried out. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the lakes. In the more extensive agricultural areas sheep grazing is carried out.

Fishing is a main tourist attraction on the Boyne and Blackwater and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. The Eastern Regional Fishery Board have erected fencing along selected stretches of the river as part of their salmonid enhancement programme. Parts of the river system have been arterially dredged. In 1969 an arterial dredging scheme commenced and disrupted angling for 18 years.

The dredging altered the character of the river completely and resulted in many cases in eaving very high banks. The main channel from Drogheda upstream to Navan was left untouched, as were a few stretches on the Blackwater. Ongoing maintenance dredging is carried out along stretches of the river system where the gradient is low. This is extremely destructive to salmonid habitat in the area. Drainage of the adjacent river systems also impacts on the many small wetland areas throughout the site. The River Boyne is a designated Salmonid Water under the EU Freshwater Fish Directive.

The site supports populations of several species listed on Annex II of the EU Habitats Directive, and habitats listed on Annex I of this directive, as well as examples of other important habitats. Although the wet woodland areas appear small there are few similar examples of this type of alluvial wet woodland remaining in the country, particularly in the north-east. The semi-natural habitats, particularly the strips of woodland which extend along the river banks and the marsh and wet grasslands, increase the overall habitat diversity and add to the ecological value of the site as does the presence of a range of Red Data Book plant and animal species and the presence of nationally rare plant species