Sub 106. Office

AN ROINN COMHSHAOIL, OIDHREACHTA AGUS RIALTAIS ÁITIÚIL
DEPARTMENT OF THE ENVIRONMENT, HERITAGE AND LOCAL GOVERNMENT

2 March 2005

Our Ref: E2004/48

Your Ref: 204-1

Mr. Malcolm Doak,
Office of Licensing & Guidance,
Environmental Protection Agency,
PO Box 3000,
Johnston Castle Estate,
Co. Wexford.

AN ROINN COMHSHAOIL,
OIDHREACHTA AGUS
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Re: Waste Licence Application re: Brownfield Restoration Ireland Ltd. at Whitestown Lower, Co. Wicklow

7/3/05
Admin
Please file as a submission to 204-1. M.D.

Dear Mr. Doak,

We refer to your notification in relation to the above and the copy of the Environmental Impact Statement (EIS) which was recently received. Outlined below are the nature conservation recommendations of the Department of the Environment, Heritage and Local Government.

It is noted that the site in question is 50m from the Carrigower River, which is part of the Slaney River candidate Special Area of Conservation (cSAC) site code No. 00781.

For the reasons set out below, the Department considers that the risk of polluting the Slaney River Valley cSAC is unacceptably high and we therefore recommend that the EPA should not grant this licence. This is based on a review of the EIS. In addition to the main issues set out in this letter, we also append detailed specific points at Appendix I. A site synopsis for the Slaney River cSAC is also attached for your information.

It is felt that the EIS in general does not fully address the likely impacts of this development on the flora and fauna in the vicinity. If the development proceeds, there will be elevated suspended solids in the river during the construction phase. Furthermore, runoff will be discharged into the river at the construction phase. We believe that the risk will continue for as long as materials will be decomposing in the site (even up to 1,000 years from now). The risk to the river is even greater at the time when the previously dumped materials are being moved. The movement could release a large amount of contaminated water, which would flow down to the river. We note that, some of the dumped material lies below the river level.

The EIS itself states that "If the mitigation measures fail or are abandoned the Carrigower River and the Slaney River Valley cSAC (781) will sustain at least 30 years continued pollution as materials in this site break down." We are concerned that even if the measures work, the site will be abandoned in 60 years time and the pumps

switched off, resulting in a build up of the leachate in the pit and consequently there will be a great risk of overtopping (the spilling out of leachate over the top of the landfill). After that, the degradation in the cap and the geomembrane could cause problems for 1,000 years. (*Predicting the Groundwater Impact of modern Landfills* Hall, Drury, Smith, Potter and Gronow – proceedings Sardinia Ninth international Waste management and landfill Symposium 2003)

Kindly forward any further information received or in the event of a decision being made a copy of same should be forwarded to the following address as soon as it issues:

The Manager,
Development Applications Unit,
Department of the Environment, Heritage and Local Government,
Dún Scéine,
Harcourt Lane,
Dublin 2.

Yours sincerely,

Brid Rochfort

Brid Rochfort,
Development Applications Unit

Encl.

Appendix 1

Review of EIS for Waste Licence Application
re: Brownfield Restoration Ireland Ltd. at Whitestown Lower, Co. Wicklow

Flora and Fauna

1. As the Natura and Roger Goodwillie surveys were performed during the winter months, the presence of rare plants such as basil thyme may have gone unnoticed,
   Recommendation: This survey should be performed in the summer.

2. Table 1 in the executive summary does not state what the impacts of this development will be on the flora and fauna. It is felt that the EIS in general does not fully address the likely impacts on the flora and fauna.
   Recommendation: Survey and comment on the impact of this proposal for the flora and fauna of the area.

3. Table 3 talks of proposed monitoring of the site. There is no mention of any proposed monitoring of the effects of the development on the flora and fauna.
   Recommendation: A proper monitoring scheme should be incorporated into the proposal, monitoring the effects on a wide range of environmental indicators for 60 years.

4. Section 3.4.1 mentions extensive signs of otter activity. No assessment has been performed of the impact on otters as an Annex 2 species under the EU Habitats Directive (Council Directive No. 92/43/EEC of 1992 on the conservation of natural habitats and of wild fauna and flora).
   Recommendation: This should be assessed.

5. The EIS does not assess the impact of the development on lamprey, which is another Annex 2 species under the EU Habitats Directive.
   Recommendation: This should be assessed.

6. The section of the EIS on flora and fauna does not assess the impact of any leak from the site on the cSAC. Nor does any other section assess it in those terms.
   Recommendation: This should be assessed.

7. The EIS does not assess the impact of any leak from the site on spawning salmonids. The Carrigower River has only just recovered from arterial drainage damage to become on of the most important spawning areas in the Slaney River cSAC. This development has the potential to introduce increased amounts of ammoniacal nitrate into the river which would have detrimental effects.
   Recommendation: This should be assessed.

8. Section 3.4.4 states that measures will be taken during construction to ensure that surface waters will not be impacted on, however, these measures do not appear to have been outlined in the EIS.
   Recommendation: The measures should be described and their impacts assessed.

9. Section 3.4.1 states that the Q value of the Carrigower River is 3-4. The fact that the river is showing signs of pollution at present makes it all the more vulnerable to any impact from this site.

Comment: In our opinion, any risk to this river is unacceptable.

10. Section 3.4.2 states that elevated suspended solids are expected during initial construction phase.
Comment: We consider that this is not acceptable for spawning fish.

11. The EIS does not state that any interference with the badger sett on the site can only be done under licence from the National Parks and Wildlife Service.
Recommendation: This should be addressed.

Water Quality

1. Section 2.8.2.2. states that runoff from the Resource Recovery Building (RBB) will be in contact with some contaminated materials. However, this is just going to a holding pond. There are implications for this in very wet weather.
Recommendation: Runoff should be treated as leachate.

2. Figure 3.7.6 entitled *Inferred Hydrogeoligical Catchment Area Enclosing Site*, shows the flow of groundwater in a NW to SE direction through the site. This is the recharge area for the Carrigower River. Any contaminant that reaches the groundwater will reach the cSAC. The gravels that form this aquifer have not been tested by the GSI.
Comment: In our opinion, the risk of polluting the cSAC is unacceptable.

3. Section 2.8.3.5 deals with the treatment of leachate. According to the EIS, it is intended to bring the leachate to the waste water treatment plant in Baltinglass.
Comment: The Baltinglass Waste Water Treatment plant is a secondary treatment plant. It is currently being upgraded so that it can take the leachate from the County Council dump in Rampiere. The treated water from this plant is discharged into the River Slaney cSAC. Additional leachate from Whitestown is likely to stress the upgraded system and could cause environmental damage downstream at Baltinglass and downstream. This is closer to the pearl mussel beds and more likely to impact on them. Furthermore, the solids from Baltinglass are land spread. No mention is made of the increased loading of heavy metals which would be introduced to the solid material by treating the Whitestown leachate there.

4. Section 2.8.3.4 states that leachate will be monitored in the sumps.
Clarification sought: How and when will this be checked? What emergency procedures have been put in place in the event that something goes wrong with the sumps?

5. Section 2.10 states that "only clean runoff discharges into drainage channels that lead from the site to the Carrigower River". This refers to the stage when the current (illegal) waste is being moved. It is probably the stage when the river is most vulnerable to pollution from the site.
Recommendation: Nothing should be discharged into the river.

6. Section 2.11.6 refers to laboratory facilities to test soil.
Clarification sought: What water testing will take place and who will do it?
Recommendation: Full time monitoring would be required by an independent body due to the sensitivity of this site.

7. Section 2.15.5 estimates that diffuse pollution through a leak in the liner could amount to 54 litres per day ($20m^3$/year). Further on in section 2.15.5, this figure is quoted as being $<100m^3$/year. There is a huge difference between these figures.
Comment: The EIS does not assess the likely impact of $100m^3$/year discharging into the cSAC. It also states that the quantity of each type of waste that the site will receive is not known, therefore, it is difficult to predict the nature and composition of the leachate. This means that they do not know the potential damage and are not assessing the risk to the cSAC in a realistic fashion.

8. Section 11.6.2 states that the compliance standard for ammoniacal nitrogen according to the Salmonid regulations is 0.016mg/litre. Leachate from the existing drilled wells on site has contained 4.5mg/litre.
Comment: This is almost 300 times the compliance standard. Any leakage of this material would be unlikely to be diluted enough before it reaches the river. This site presents a real danger for environmental damage to the cSAC.
Furthermore, Leachate will be increased by the fact that the site will not be capped until the last two years of the programme.

9. Section 3.4.4: The Goodwillie report suggests planting alders to filter and absorb nutrients from the leachate.
Comment: It is questionable whether this would remove many contaminates from the leachates (this can work in an integrated waste water treatment facility which is not what is being designed here). In addition, it would take many years for this to work.

Other comments:

The use of water bowsers to reduce dust levels during construction increases the risk of contaminated leachate and runoff reaching the Carrigower River.
There is a question about where the water for the bowsers will come from.
Clarification sought: If this is to be extracted from the river what will be the impact of this?

The EIS states that:

- the risk from this site continues as long as the material in it is breaking down
- the impact on the cSAC would continue for 10 years after the completion of the landfill
- ammoniacal nitrogen is harmful to salmonids especially at the egg and juvenile stages
- ammoniacal nitrogen causes eutrophication and thus is harmful to Margaritifera margaritifera.

Comment: If the mitigation measures fail or are abandoned, the Carrigower River and the Slaney River Valley cSAC (site code No. 00781) will sustain 30 years continued pollution as materials in this site break down.

SITE SYNOPSIS

SITE NAME: SLANEY RIVER VALLEY

SITE CODE: 000781

This site comprises the freshwater stretches of the Slaney as far as the Wicklow Mountains; a number of tributaries the larger of which include the Bann, Glasha, Clody, Derry, Derreen, Douglas and Carrigower Rivers; the estuary at Ferrycarrig and Wexford Harbour. The site flows through the counties of Wicklow, Wexford and Carlow. Towns along the site but not in it are Baltinglass, Hacketstown, Tinahely, Tullow, Bunclody, Camolin, Enniscorthy and Wexford. The river is up to 100 m wide in places and is tidal at the southern end from Edermine Bridge below Enniscorthy. In the upper and central regions almost as far as the confluence with the Derry River the geology consists of granite. Above Kilcarry Bridge, the Slaney has cut a gorge into the granite plain. The Derry and Bann Rivers are bounded by a narrow line of uplands which corresponds to schist outcrops. Where these tributaries cut through this belt of hard rocks they have carved deep gorges, more than two miles long at Tinahely and Shillelagh. South of Kildavin the Slaney flows through an area of Ordovician slates and grits.

The site is a candidate SAC selected for alluvial wet woodlands, a priority habitat on Annex I of the E.U. Habitats Directive. The site is also selected as a candidate SAC for floating river vegetation, estuaries, tidal mudflats and old oak woodlands, all habitats listed on Annex I of the E.U. Habitats Directive. The site is further selected for the following species listed on Annex II of the same directive - Sea Lamprey, River Lamprey, Brook Lamprey, Freshwater Pearl Mussel, Twaite Shad, Atlantic Salmon and Otter.

Floating river vegetation is found along much of the freshwater stretches within the site. Species present here include Pond Water-crowfoot (*Ranunculus peltatus*), Water-crowfoot (*Ranunculus* spp.), Canadian Pondweed (*Elodea canadensis*), Broad-leaved Pondweed (*Potamogeton natans*), Water Milfoil (*Myriophyllum* spp.), Common Club-rush (*Scirpus lacustris*), Water-starwort (*Callitriche* spp.), Hemlock Water-dropwort, Fine-leaved Water-dropwort (*Oenanthe aquatica*), Common Duckweed (*Lemna minor*), Yellow Water-lily (*Nuphar lutea*), Unbranched Bur-reed (*Sparganium emersum*) and the moss *Fontinalis antipyretica*. Two rare aquatic plant species have been recorded in this site: Short-leaved Water-starwort (*Callitriche truncata*), a very rare, small aquatic herb found nowhere else in Ireland; and Opposite-leaved Pondweed (*Groenlandia densa*), a species that is legally protected under the Flora Protection Order, 1999.

Good examples of wet woodland are found associated with Macmine marshes, along banks of the Slaney and its tributaries and within reed swamps. Grey Willow (*Salix cinerea*) scrub and pockets of wet woodland dominated by Alder (*Alnus glutinosa*) have become established in places. 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 Tussock-sedge (*Carex paniculata*). These woodlands have been described as two types: one is quite

eutrophic, is dominated by Willow and is subject to a tidal influence. The other is flushed or spring-fed subject to waterlogging but not to flooding and is dominated by Alder and Ash.

Old oak woodlands are best represented at Tomnafinnoge though patches are present throughout the site. At Tomnafinnoge the wood is dominated by mature, widely spaced Sessile Oak (*Quercus petraea*), which were planted around 1700, with some further planting in 1810. There is now a varied age structure with overmature, mature and young trees; the open canopy permits light to reach the forest floor and encourages natural regeneration of Oak. As well as Oak, the wood includes the occasional Beech (*Fagus sylvatica*), Birch (*Betula* sp.), Rowan (*Sorbus aucuparia*) and Scots Pine (*Pinus sylvestris*).

The shrub layer is well-developed with Hazel (*Corylus avellana*) and Holly (*Ilex aquifolium*) occurring. The ground layer consists of Great Wood-rush (*Luzula sylvatica*) and Bilberry (*Vaccinium myrtillus*), with some Bracken (*Pteridium aquilinum*) and Brambles (*Rubus fruticosus* agg.). Herbaceous species in the ground layer include Primrose (*Primula vulgaris*), Wood-sorrel (*Oxalis acetosella*), Common Cow-wheat (*Melampyrum pratense*) and Bluebell (*Hyacinthoides non-scripta*). Many of the trees carry an epiphytic flora of mosses, Polypody Fern (*Polypodium vulgare*), and lichens such as *Usnea comosa, Evernia prunastri*, *Ramalina* spp. and *Parmelia* spp.

Tomnafinnoge Wood is a remnant of the ancient Shillelagh Oak woods, and it appears that woodland has always been present on the site. In the past, the wood was managed as a Hazel coppice with Oak standards, a common form of woodland management in England but not widely practised in Ireland. The importance of the woodland lies in the size of the trees, their capacity to regenerate, their genetic continuity with ancient woodland and their historic interest. The nearest comparable stands are at Abbeyleix, Co. Laois and Portlaw, Co. Waterford.

Below Enniscorthy there are several areas of woodland with a mixed canopy of Oak, Beech, Sycamore (*Acer pseudoplatanus*), Ash and generally a good diverse ground flora. Near the mouth of the river at Ferrycarrig is a steep south facing slope covered with Oak woodland. Holly and Hazel are the main species in the shrub layer and a species-rich ground flora typical of this type of Oak woodland has abundant ferns - *Dryopteris filix-mas, Polystichum setiferum, Phyllitis scolopendrium* - and mosses - *Thuidium tamariscinum, Mnium hornum, Eurynchium praelongum.*

North of Bunclody, the river valley still has a number of dry woodlands though these have mostly been managed by the estates with the introduction of Beech and occasional conifers. The steeper sides are covered in a thick scrub from which taller trees protrude. At the southern end of the site, the Red Data Book species Yellow Archangel (*Lamiastrum galeobdolon*) occurs. Three more Red Data Book species have also been recorded from the site: Basil Thyme (*Acinos arvensis*), Blue Fleabane (*Erigeron acer*) and Small Cudweed (*Filago minima*). A nationally rare species Summer Snowflake (*Leucojum aestivum*) is also found within the site.

Mixed woodlands occur at Carrickduff and Coolaphuca in Bunclody. Oak trees, which make up the greater part of the canopy, were originally planted and at the present time are not regenerating actively. In time, if permitted, the woodland will probably go to

Beech. A fair number of Yew (*Taxus baccata*) trees have also reached a large size and these, together with Holly give to the site the aspect of a south-western Oak wood.

The site is considered to contain a very good example of the extreme upper reaches of an estuary. Tidal reedbeds with wet woodland are present in places. The fringing reed communities support Sea Club-rush (*Scirpus maritimus*), Grey Club-rush (*S. tabernaemontani*) and abundant Common Reed (*Phragmites australis*). Other species occurring are Bulrush (*Typha latifolia*), Reed Canary-grass (*Phalaris arundinacea*) and Branched Bur-reed (*Sparganium erectum*). The reed-swamp is extensive around Macmine, where the river widens and there are islands with swamp and marsh vegetation.

Further south of Macmine are expanses of intertidal mudflats and sandflats and shingly shore often fringed with a narrow band of salt marsh and brackish vegetation. Narrow shingle beaches up to 10 m wide occur in places along the river banks and are exposed at low tide. Upslope the shingle is sometimes colonised by Saltmarsh Rush (*Juncus gerardi*), Townsend's Cord-grass (*Spartina townsendii*), Common Saltmarsh-grass (*Puccinellia maritima*), Sea Aster (*Aster tripolium*), Hemlock Water-dropwort (*Oenanthe crocata*) and Himalayan Balsam (*Impatiens glandulifera*).

Wexford Harbour is an extensive, shallow estuary which dries out considerably at low tide exposing large expanses of mudflats and sandflats. The harbour is largely sheltered by the Raven Point to the north and Rosslare Point in the south.

Other habitats present within the site include species-rich marsh in which sedges such as *Carex disticha, Carex riparia* and *Carex vesicaria* are common. Among the other species found in this habitat are Yellow Iris (*Iris pseudacorus*), Water Mint (*Mentha aquatica*), Purple Loosestrife (*Lythrum salicaria*) and Soft Rush (*Juncus effusus*). Extensive marshes occur to the west of Casltebridge associated with the tidal areas of the River Sow.

The site supports populations of several species listed on Annex II of the EU Habitats Directive including the three Lampreys - Sea Lamprey (*Petromyzon marinus*), River Lamprey (*Lampetra fluviatilis*) and Brook Lamprey (*Lampetra planeri*), Otter (*Lutra lutra*), Salmon (*Salmo salar*), small numbers of Freshwater Pearl Mussel (*Margaritifera margaritifera*) and in the tidal stretches, Twaite Shad (*Alosa fallax fallax*). A survey of the Derreen River in 1995 estimated the population of Freshwater Pearl Mussel at about 3,000 individuals. This is a significant population, especially in the context of eastern Ireland. The Slaney is primarily a spring salmon fishery and is regarded as one of the top rivers in Ireland for early spring fishing. The upper Slaney and tributary headwaters are very important for spawning.

The site supports important numbers of birds in winter. Little Egret are found annually along the river. This bird is only now beginning to gain a foothold in Ireland and the south-east appears to be its stronghold. Nationally important numbers of Black-tailed Godwit, Teal, Tufted Duck, Mute Swan, Little Grebe and Black-headed Gull are found along the estuarine stretch of the river. The mean of the maximum counts over four winters (1994/98) along the stretch between Enniscorthy and Ferrycarrig is: Little Egret (6), Golden Plover (6), Wigeon (139), Teal (429), Mallard (265), Tufted Duck (171), Lapwing (603), Shelduck (16), Black-tailed Godwit (93), Curlew (81), Red-breasted Merganser (11), Black-headed Gull (3030), Goldeneye (45), Oystercatcher

(19), Redshank (65), Lesser Black-backed Gull (727), Herring Gull (179), Common Gull (67), Grey Heron (39), Mute Swan (259) and Little Grebe (17). Wexford Harbour provides extensive feeding grounds for wading birds and Little Terns, which are listed on Annex I of the E.U. Birds Directive have bred here in the past.

The Reed Warbler, which is a scarce breeding species in Ireland, is regularly found in Macmine Marshes but it is not known whether or not it breeds in the site. The Dipper also occurs on the river. This is a declining species nationally.

The site supports many of the mammal species occurring in Ireland. Those which are listed in the Irish Red Data Book include Pine Marten, Badger, Irish Hare and Daubenton's Bat. Common Frog (*Rana temporaria*), another Red Data Book species, also occurs within the site.

Agriculture is the main landuse. Arable crops are important. Improved grassland and silage account for much of the remainder. The spreading of slurry and fertiliser poses a threat to the water quality of this salmonid river and to the populations of Annex II animal species within it. Run-off is undoubtedly occurring, as some of the fields slope steeply directly to the river bank. In addition, cattle have access to the site in places. Fishing is a main tourist attraction along stretches of the Slaney and its tributaries and there are a number of Angler Associations, some with a number of beats. Fishing stands and styles have been erected in places. Both commercial and leisure fishing takes place. There are some gravel pits along the river below Bunclody and many of these are active. There is a large landfill site adjacent to the river close to Hacketstown and at Killurin. Boating, bait-digging and fishing occur in parts of Wexford Harbour.

Waste water outflows, runoff from intensive agricultural enterprises, a meat factory at Clohamon and a landfill site adjacent to the river and further industrial development upstream in Enniscorthy and in other towns could all have potential adverse impacts on the water quality unless they are carefully managed. The spread of exotic species is reducing the quality of the woodlands.

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 important numbers of wintering wildfowl including some species listed on Annex I of the EU Birds Directive. The presence of wet and broad-leaved woodlands increases the overall habitat diversity and the occurrence of a number of Red Data Book plant and animal species adds further importance to the Slaney River site.

16.01.2003

Environmental Protection Agency
An Ghníomhaireacht um Chaomhnú Comhshaoil

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Ms Brid Rochfort
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Dublin 2

8th March 2005 **204-1**

Waste Licence Application re: Brownfield Restoration Ireland Ltd at Whitestown Lower, Co Wicklow.

Dear Ms Rochfort

I am to refer to your letter of 02/03/2005, received on 22/02/2005, in relation to an application for a waste licence reference number 204-1, by Brownfield Restoration Ireland Ltd, in respect of a facility at Brownfield Restoration Ireland Ltd, Whitestown Lower, Co Wicklow.

I am to advise that your letter will be treated as a submission and will be taken into account when determining the application in accordance with the Waste Management Acts, 1996 to 2003, and Article 15 of the relevant Waste Management (Licensing) Regulations, which provides as follows:

Extract from the Waste Management (Licensing) Regulations

Submissions to the Agency regarding applications.

15. For the purpose of section 40(2)(b) of the Act a person may make a written submission to the Agency in relation to -
(i) an application, and
(ii) such plans, documents and other information and particulars, including an environmental impact statement, as are submitted by the applicant in accordance with articles 12, 13, 14 and 16,
and the Agency shall not give notice of a proposed decision under section 42(2) of the Act before the expiry of a period of one month following the date of a relevant –
(a) acknowledgement in accordance with article 14(2)(a), or
(b) notice in accordance with article 16(2)(a), or
(c) acknowledgement in accordance with article 16(4), whichever such date is the later.

The application and associated correspondence, including the acknowledgements and notifications referred to in Article 15 above, are available on the public file relating to the application as they arise and that file may be inspected by any person during office hours at the Agency's headquarters. A copy of the file is also available for inspection at the Agency's Headquarters in Wexford and at the offices of Wicklow County Council. Copy extracts from the file will be supplied by the Agency to any person, on request, subject to payment of the reasonable cost of making the copy.

You are advised to refer to the public file for information on the progress of the application. The Agency will write to you to inform you of its proposed decision on the application in due course. Please direct any further correspondence in relation to this matter to Administration, Office of Licensing & Guidance, Environmental Protection Agency, Headquarters, P.O. Box 3000, Johnstown Castle Estate, County Wexford.

Yours sincerely,

Tracey Berney

Tracey Berney
Programme Officer
Office of Licensing & Guidance