

HABITATS DIRECTIVE ASSESSMENT – STAGE 1 (SCREENING MATRIX)

Stage 1: SCREENING MATRIX FOR THE EXISTING UNREGULATED WASTE DISPOSAL SITE AT VELVETSTOWN, NEAR CHARLEVILLE, CO. CORK, WITH REGARD TO POTENTIAL IMPACTS ON THE BLACKWATER RIVER (CORK/WATERFORD) cSAC (SITE CODE 002170) - NATURA 2000 SITE (candidate Special Conservation Area) * (cSAC).

(Following Article 6 (3) of the European Union Habitats Directive (92/43/EEC))

**Guidelines used in this assessment	
1. Description of the project or plan	
Location	The Velvetstown Landfill is located 2km north of Buttevant town, Co. Cork (GIS coordinates E154,650, N111,788) on the west side of the existing N20 road. The existing landfill covers an area of approximately 0.40 hectares.
Distance from designated site	The existing landfill at Velvetstown is located approximately 280m east of the cSAC, where the latter designation covers the Awbeg River. The Awbeg is a tributary of the River Blackwater and is part of the Blackwater River (Cork/Limerick) cSAC (Site Code 002170). This cSAC is part of the Natura 2000 network of sites protected under the EU Habitats Directive (92/43/EEC).
Brief Description of the project or plan	The existing landfill is on the site of an old quarry. It is estimated that this site was in use from about 1968/69 to approximately 1979/80. The waste that it contains is categorised as non-hazardous municipal solid waste. Remediation of this existing landfill is proposed in the form of an engineered capping system, which will be placed over the landfill to prevent any percolation of rainwater.
Is the plan directly connected with or necessary to the Natura 2000 site management for nature conservation?	No

* A candidate Special Area of Conservation is designated under the EU Habitats Directive (92/43/EEC) for the protection of certain habitats and species as listed in the Directive.

** Prepared in accordance with the following documents:

Department of the Environment, Heritage and Local Government (2010) Appropriate Assessment of Plans and Projects in Ireland: Guidance for Planning Authorities.

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

European Commission (2001) Assessment of plans and projects significantly affecting Natura 2000 sites: Methodological guidance on the provisions of Articles 6(3) and (4) of the Habitats Directive 92/43/EEC and

European Commission (2007) Guidance document on Article 6(4) of the 'Habitats Directive' 92/49/EEC; clarification of the concepts of: Alternative solutions, Imperative reasons of overriding public interest, Compensatory Measures, Overall Coherence, Opinion of the Commission.

The information on the Natura 2000 site is taken from the site synopsis¹.

2. Brief Description of the Natura 2000 site	
Name	Blackwater River (Cork/Limerick) cSAC (Site Code 002170)
Site designation status	<ul style="list-style-type: none"> ▪ Designation: Candidate Special Area of Conservation (Site Code 002170) ▪ Basis: EU Habitats Directive (92/43/EEC)
Natura 2000 Site description	The River Blackwater is one of the largest rivers in Ireland, draining a major part of Co. Cork and five ranges of mountains. The site consists of the freshwater stretches of the River Blackwater as far upstream as Ballydesmond, the tidal stretches as far as Youghal Harbour and many tributaries, the larger of which includes the Licky, Bride, Flesk, Chimneyfield, Finisk, Araglin, Awbeg (Buttevant), Clyda, Glen, Allow, Dalua, Brogeen, Rathcool, Finnow, Owentaraglin and Awnaskirtaun. The site is selected for a range of Annex I woodland, river, estuarine and intertidal habitats along with a number of Annex II species (as listed in the EU Habitats Directive 92/43/EEC). The site is also considered to be of high conservation value for the populations of several bird species listed under Annex I of the EU Birds Directive which use the site. Additionally the importance of the site is enhanced by the presence of a number of rare plant species, a number of which are protected under the Flora (Protection) Order, 1999.
Qualifying species	<ul style="list-style-type: none"> ▪ Sea lamprey (<i>Petromyzon marinus</i>) ▪ Brook lamprey (<i>Lampetra planeri</i>) ▪ River lamprey (<i>Lampetra fluviatilis</i>) ▪ Otter (<i>Lutra lutra</i>) ▪ Twaite shad (<i>Alosa fallax</i>) ▪ White-clawed crayfish (<i>Austropotamobius pallipes</i>) ▪ Atlantic salmon (<i>Salmo salar</i>) ▪ Freshwater pearl mussel (<i>Margaritifera margaritifera</i>) ▪ Killarney fern (<i>Trichomanes speciosum</i>)
Qualifying habitats	<ul style="list-style-type: none"> ▪ Alluvial forests with <i>Alnus glutinosa</i> and <i>Fraxinus excelsior</i> (<i>Alno-Padion</i>, <i>Alnion incanae</i>, <i>Salicion albae</i>) (91E0)[†] ▪ <i>Taxus baccata</i> woods of the British Isles (91J0)[†] ▪ Old sessile oak woods with <i>Ilex</i> and <i>Blechnum</i> in British Isles (91A0) ▪ Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation (3260) ▪ Estuaries (1130) ▪ <i>Salicornia</i> and other annuals colonising mud and sand (1310) ▪ Mudflats and sandflats not covered by seawater at low tide (1140) ▪ Atlantic salt meadows (<i>Glauco-Puccinellietalia maritima</i>) (1330) ▪ Mediterranean salt meadows (<i>Juncetalia maritimi</i>) (1410) ▪ Perennial vegetation of stony banks (1220) <p>[†]priority habitat on Annex I of the EU Habitats Directive (92/43/EEC)</p>
Non-qualifying habitats and species of interest	<p>Habitats of interest include those with potential links to Annex I habitats:</p> <ul style="list-style-type: none"> ▪ Wet willow-alder-ash woodland ▪ Wet grassland ▪ Marsh ▪ Semi-natural deciduous woodlands ▪ Old estate woodlands ▪ Reed and large sedge swamps ▪ Lowland depositing rivers with floating aquatic vegetation (<i>Ranunculus spp.</i>) which has links to the Annex I habitat Water courses of plain to montane levels with the <i>Ranunculion fluitantis</i> and <i>Callitricho-Batrachion</i> vegetation ▪ Blanket bog ▪ Heath <p>Five Red Data Book² plant species, in addition to the Killarney fern, have been recorded within the site and are listed below. Of these the Killarney fern, starved wood sedge and pennyroyal are protected under the Flora (Protection) Order 1999.</p> <ul style="list-style-type: none"> ▪ Starved wood sedge (<i>Carex depauperata</i>)

	<ul style="list-style-type: none"> ▪ Pennyroyal (<i>Mentha pulegium</i>) ▪ Bird's-nest orchid (<i>Neottia nidus-avis</i>) ▪ Golden dock (<i>Rumex maritimus</i>) ▪ Bird cherry (<i>Prunus padus</i>) <p>Fauna species protected under the Wildlife Act, 1976 and Wildlife (Amendment) Act, 2000:</p> <ul style="list-style-type: none"> ▪ All bat species* ▪ Common frog (<i>Rana temporaria</i>) ▪ Badger (<i>Meles meles</i>) ▪ Pine marten (<i>Martes martes</i>)* ▪ Irish hare (<i>Lepus timidus hibernicus</i>) <p>Annex I (EU Birds Directive, 79/409/EEC) bird species of interest:</p> <ul style="list-style-type: none"> ▪ Kingfisher (<i>Alcedo atthis</i>) ▪ Hen harrier (<i>Circus cyaneus</i>) ▪ Peregrine falcon (<i>Falco peregrinus</i>) <p>A wide range of other Annex I (EU Birds Directive, 79/409/EEC) waterfowl species are also found in the site in internationally important numbers such as Whooper swan (<i>Cygnus cygnus</i>), Bewick's swan (<i>Cygnus bewickii</i>) and black-tailed godwit (<i>Limosa limosa</i>). However, these species are predominantly associated with the Blackwater Estuary and Blackwater Callows and do not occur in the area of the site subject of this assessment.</p>
Unit size	Approx. 15049 ha
Condition	<p>Overall, the River Blackwater is of considerable conservation significance for the occurrence of good examples of habitats and of populations of plant and animal species that are listed on Annexes I and II of the E.U. Habitats Directive respectively; furthermore it is of high conservation value for the populations of bird species that use it. Two Special Protection Areas, designated under the E.U. Birds Directive, are also located within the site - Blackwater Callows and Blackwater Estuary. Additionally, the importance of the site is enhanced by the presence of a suite of uncommon plant species.</p> <p>The main threats to the site and current damaging activities include high inputs of nutrients into the river system from agricultural run-off and several sewage treatment works, dredging of the upper reaches of the Awbeg, overgrazing within the woodland areas, and invasion by non-native species, for example Cherry Laurel. The Munster Blackwater pearl mussel population is in decline due to depressed river quality from nutrient enrichment and siltation from agriculture, forestry, sewage and industry and is deemed to be at unfavourable conservation status in the catchment³.</p>
3. Assessment Criteria	
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 sites.	<ul style="list-style-type: none"> • There is no direct overlap between the existing landfill at Velvetstown and the cSAC, which is approximately 280m to the west. There will thus be no habitat loss within the cSAC as a result of this project. • There is the potential for contamination of groundwater and surface water from toxic compounds in the leachate associated with the existing landfill at Velvetstown. This has been addressed by a site investigation report and quantitative risk assessment⁴. • The proposed M20 Cork – Limerick Motorway Scheme, is located to the east of the existing landfill. It is proposed that the M20 alignment will avoid the landfill completely and, apart from remediation, this will be undisturbed. There will thus be no “in-combination” effects of this project with the existing landfill.
Describe any likely direct, indirect or secondary impacts of the project (either alone or in combination with	<ul style="list-style-type: none"> ▪ None of the Annex I habitats listed under the EU Habitats Directive, for which the Blackwater River (Cork/Limerick) cSAC is designated, will be impacted by the existing landfill at Velvetstown, as there is no overlap of the landfill with the cSAC boundary.

<p>other plans or projects) on the Natura 2000 site by virtue of:</p> <ul style="list-style-type: none"> ▪ Size and scale; ▪ Land-take; ▪ Distance from Natura 2000 site or key features of the site; ▪ Resource requirements; ▪ Emissions; ▪ Excavation requirements; ▪ Transportation requirements; ▪ Duration of construction, operation etc.; ▪ Others. 	<ul style="list-style-type: none"> ▪ Groundwater investigations have been undertaken in 4 No. boreholes, two of which are located on either side of the landfill and two to the west of the landfill but outside the cSAC boundary. All results for groundwater from these boreholes were below the Interim Guideline Values for groundwater except for high Total Alkalinity. The latter levels are likely to be due to the limestone rock under the landfill and not due to the landfill itself. All potassium levels recorded were within Drinking Water Standards of 12mg/L for all locations. No List I or List II substances (in accordance with the EC Groundwater Directive 88/68/EC) were recorded above guideline values. There is a continuous clay layer, with low permeability, beneath the waste. This inhibits the migration of water percolating through the waste to the bedrock. It is concluded that the Velvetstown Landfill is having no significant impact on groundwater quality in the underlying bedrock aquifer. ▪ There is no surface water in the immediate vicinity of the landfill, the nearest stream lying 450m to the south of the landfill. Given the dilute nature of the leachate and no measurable impact on the groundwater, the risk of impact on this stream is considered to be insignificant.
<p>Describe any likely changes to the site arising as a result of:</p> <ul style="list-style-type: none"> ▪ Reduction of habitat area; ▪ Disturbance of key species; ▪ Habitat or species fragmentation; ▪ Reduction in species density; ▪ Changes in key indicators of conservation value; ▪ Climate change. 	<ul style="list-style-type: none"> ▪ No changes to the Natura 2000 site are likely as a result of the continued presence of the existing landfill at Velvetstown. <p style="color: red; text-align: center; font-style: italic;">Consent of copyright owner required for any other use. For inspection purposes only.</p>
<p>Describe any likely impacts on the Natura 2000 site as a whole in terms of:</p> <ul style="list-style-type: none"> ▪ Interference with the key relationships that define the structure of the site; ▪ Interference with key relationships that define the function of the site. 	<ul style="list-style-type: none"> ▪ No impacts to the Natura 2000 site as a whole are likely as a result of the continued presence of the existing landfill at Velvetstown. There are no measurable impacts of the leachate on groundwater or surface water in the vicinity of the landfill, no loss of habitats or species within the Natura 2000 site, and hence, no likely impacts on the structure or function of the Natura 2000 site.
<p>7. Describe from the above those elements of the project or plan, or combination of elements, where the above impacts are likely to be significant or where the scale of magnitude of impacts is not known.</p>	<p>It has been concluded from this screening that there are no likely significant impacts of the existing landfill at Velvetstown on the integrity of the Blackwater River (Cork/Limerick) cSAC or on any of the Annex I habitats or Annex II species which are the qualifying interests of this Natura 2000 site. Therefore, a Habitats Directive Assessment – Stage 2 (Appropriate Assessment) is not required.</p>

References

1. National Parks and Wildlife Service (2006). *Blackwater River (Cork/Waterford) candidate Special Area of Conservation (Site Code 002170)*. Department of the Environment, Heritage and Local Government, Dublin.
2. Curtis, T.G.F and McGough, H.N. (1988). *The Irish Red Data Book*. 1. Vascular Plants. Wildlife Service, Stationary Office, Dublin.
3. NS2 (2009). *Freshwater Pearl Mussel, Draft Munster Blackwater Sub-Basin Management Plan*. Department of the Environment, Heritage and Local Government, Dublin.
4. Cork County Council, Environment Directorate (2010). *Velvetstown Tier II Site Investigation Report and Tier III Quantitative Risk Assessment*.

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