



Limerick County Council

Limerick County Council.

Churchtown Landfill Remediation Works.

Appropriate Assessment. Screening Document.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

February 2013.

Appropriate Assessment Screening –Churchtown Land Fill

The Appropriate Assessment Screening Document is for the remedial works at the old Churchtown Landfill Newcastlewest Co. Limerick. Included with this screening report is an ecological survey which was carried out in December 2012. Though outside the optimum season for vegetation and wildlife surveys, it was possible to identify plants species vegetatively.

The overall conclusion of the screening is that a full Appropriate Assessment **is not required** due to limited nature of the works involved i.e. only 1 ha. in area and the distance from Natura 2000 sites. In addition as the works are remedial measures designed to deal with leachate from a disused land fill it is expected that local environmental improvements will take place. The works are outlined below.

The screening is in accordance with the requirements of Article 6(3) of the EU Habitats Directive (92/43/EEC). The principal consideration for an Appropriate Assessment would be if the remedial works were likely to have significant effects on a Natura 2000 site – Special Areas of Conservation and Special Protection Areas (SACs and SPAs) are Natura sites. The screening should be read with the Geophysical Survey of March 12th 2012 to hand. The ecological report drawn up following site visits in December 2012 is included in Appendix 1.

The first site in question is the Lower River Shannon Special Area of Conservation Site (002165), the closest part of which is the Galey River which is 7.2km distant. The landfill also lies within 4km of the Mullaghreirks Mountains, West Limerick hills and Mount Eagle SPA (004161) which is composed of a number of upland habitats forestry at different stages of growth, open moorland rough grassland and some unplanted peat based habitats. These provide foraging and nesting sites for the hen harrier for which the site has been designated. Due to the very specific and localised works to be carried out to the old landfill site it is considered that the works will have no effects on the Special Protection Area. The works are described in the next section.

Screening Matrix

Brief description of the project:
The proposed works are remedial works on the Churchtown land fill. These works involve the diversion of leachate and run off from the old waste body to a sump on the lowest part of the site. This is then pumped to the Newcastlewest Waste Water Treatment Plant. Additional works involve the arrangement of covering materials over the waste body and the installation of water sampling and monitoring points on site.
Brief description of the Natura 2000 sites:
The water based site closest to the landfill is the Lower River Shannon SAC site, designated for a range of riparian habitats and species. The Galey River is one of the tributaries within the Feale catchment area, which is an important component of the Lower River Shannon site. The overall ecological quality of the site is heavily dependant on good water quality. The site has variety of habitats and is important for spawning salmonids and lamprey.
The site is within 4km of the Mullaghreirks Mountains, West Limerick hills and Mount Eagle SPA (004161)

which is composed of a number of upland habitats, forestry at different stages of growth, open moor land rough grassland and some unplanted peat based habitats. These provide foraging and nesting sites for the hen harrier for which the SPA site has been designated.

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 works are not likely to cause any effects on the Natura 2000 sites due to distance from the sites and the limited nature of the works involved. By dealing with contaminants from the landfill it is expected that local environmental improvements will result.

The main way in which impacts could be created on the SAC site is through the introduction of pollutants or sediments which would have an effect on water quality but as outlined above the works are designed to deal with the issue of leachate from the old waste body.

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;**

The area taken in by works and machinery traversing and activities on site is expected to be in the region of 1 ha. The site is outside designated sites and is 4km distance from the nearest Natura 2000 site.

- **Land-take;**

No land take implications- see above.

- **Distance from Natura 2000 site or key features of the site;**

The land fill is 4km from the SPA site and 7.2km from the SAC site.

- **Resource requirements (water abstraction etc);**

There are no resource implications. It is not anticipated that any extraction of material –rock etc or soil or abstraction of water would take place from any designated site. Stone may be used in the remedial works but will be taken from quarries that have planning permission or have consent under S261 or S261A. In this case the stones will be from established and licensed quarries. These quarries are governed by planning permissions or conditions laid down under the quarry registration process.

- **Emission (disposal to land, water or air);**

There is the risk of sediment or pollutants being released to ground water. Kiely (1997, p. 221) indicates that ground water pollution events tend to be localised and due to high levels of re-charge (through rainfall) tend to be of short term duration. Given the distance from the landfill to the SAC site the risk is further minimised. Two sets of water sample results, the latest from Jan 2013, indicate that the pollutant levels are not a cause for concern as they are not in concentrations which will have an effect on the Lower River Shannon SAC site. It also seems to be the case that pollutant emissions seem to be particularly dilute as the waste body has been in place for many years- see Geophysical Report. In addition there are no permanent water courses on the site which further reduces the chances of transmission of pollutants. Inspection of nearby land drains in December 2013, down-slope from the land fill, did not show any indications of leachate escaping from the site.

- **Excavation requirements;**

Any excavation that may take place within the land fill would be at a distance from the SAC site. Most works will consist of the re-arrangement of material to better cap the landfill, rather than excavation of the land fill waste body itself. This will minimise the disturbance to the residual waste thereby lessening any leakage of contaminants. The clearing of channels to divert any leachate to a sump and thence to the Waste Water Treatment Plant has been mentioned above. Sediment traps in these channels would also help to control run off of sediment.

Transportation requirements;

Plant and trucks will be involved in bringing the material to the site and removal of material. With traffic movement confined to the roads there will not be transport effects on the water courses or drainage features nearby.

- **Duration of construction, operation, decommissioning, etc;**

18 months- monitoring will be on going.

- **Other**

Not applicable.

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

- **reduction of habitat area:**

None- the works are to a previously existing landfill and will not result in any further development outside the existing foot print of the Churchtown landfill.

- **habitat or species fragmentation;**

Given the location of the works-on the old land fill site and 7 km from the Lower River Shannon Sac site and 4.2km from the SPA no effects on these sites are likely.

- **reduction in species density;**

Not applicable in that the landfill is outside and at a distance from Natura 2000 sites and would have any ex-situ effects as the scale of works is limited and measures are in place to reduce run off from the site.

- **changes in key indicators of conservation value**

None-see point above.

- **Climate change:**

No implications for climate change due to limited scale of the works.

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;**

None, the land fill lies outside the SPA and SAC the works are limited in scale. In relation to the SAC site, both the limited scope of the works allied to distance and mitigation measures (diversion and treatment of leachate) are expected to ensure that there will not be any significant effects on the SAC site.

- **interference with key relationships that define the function of the site;**

See above.

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

- **loss;**

Not applicable.

- **Fragmentation;**

Not applicable.

- **Disruption;**

Not applicable.

- **Disturbance;**

Not applicable.

- **change to key elements of the site (e.g. water quality etc);**

Not applicable. The mitigation measures mentioned above, treatment of leachate.

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 or magnitude of impacts are not known.

It is not likely that any combination of elements will have effects as the landfill is outside the Special Protection Area and SAC site. The small scale of works is not likely to have any effects on the Lower River Shannon as they are confined to the landfill itself. It is considered that a full Appropriate Assessment is not required. The works are designed to rehabilitate an old land fill which by reducing pollution risk would lessen chances of ecological damage.

Finding of No Significant Effects Matrix

Name of Project:	Remedial works on disused land fill at Churchtown Newcastlewest.
Name and location of Natura 2000 sites:	Mullaghreirks Mountains, West Limerick hills and Mount Eagle SPA (004161) within 4km. Lower River Shannon SAC site 002165, the bridge is located within the SAC site.
Description of the Project or Plan	The proposed works are remedial works on the Churchtown land fill. These works involve the diversion of leachate and run off from the old waste body to a sump on the lowest part of the site. This is then pumped to the Newcastlewest Waste Water Treatment Plant. Additional works involve the arrangement of covering materials over the waste body and the installation of water sampling and monitoring points on site.
Is the Project or Plan directly connected with or necessary to the management of the site (provide details) ?	No, but the works will lessen the chances of local pollution to ground water.
Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?	There are no other projects current on the land fill.
The Assessment of Significance of Effects	
Describe how the project or plan (alone or in combination) is likely to affect the Natura 2000 sites:	Unlikely to have any effects as the works involve the rehabilitation of an old land fill site, directing run off to the local WWTP and re-arrangement of the cover material on the site.
Explain why these effects are not considered significant:	See report above. Main factors are distance from the Natura 2000 sites and the limited scale of the works, the treatment of the leachate and the lack of surface water drainage features which would carry pollutants to the SAC site.
List of Agencies Consulted: Provide contact name and telephone or email address:	<i>The Manager, Development Applications Unit DoEHLG Newtown Road, Wexford.</i>

	<i>(T: 053 9117382)</i>		
Response to consultation	<i>Awaited.</i>		
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
<i>Heritage Officer, Forward Planning Section, Limerick County Council.</i>	<i>Existing NPWS Site Synopsis Site visits and site surveys. .</i>	<i>Desktop study, site visits</i>	<i>The conclusions are included in the screening document and the site report is attached in an Appendix to this document.</i>

For inspection purposes only.
Consent of copyright owner required for any other use.

Appendix One: Site report.

*For inspection purposes only.
Consent of copyright owner required for any other use.*

CHURCHTOWN LAND FILL ECOLOGICAL SURVEY

TO: B MURPHY SEE
FROM: T O NEILL HO
SUBJECT: AS ABOVE
SITE VISIT: 11/12/12.
DATE: 8/2/2013.

Site description and location: the site is a disused land fill which ceased operation in 1986 after operating for approximately 30 years. Prior to this it was limestone quarry which ceased operations about 1930. It is 1.7ha in extent and slopes from the NE to the SW. The on site vegetation has been largely disturbed by machinery which has bored monitoring wells on site. It is located to the north west of Newcastlewest immediately outside the boundary of the LAP.

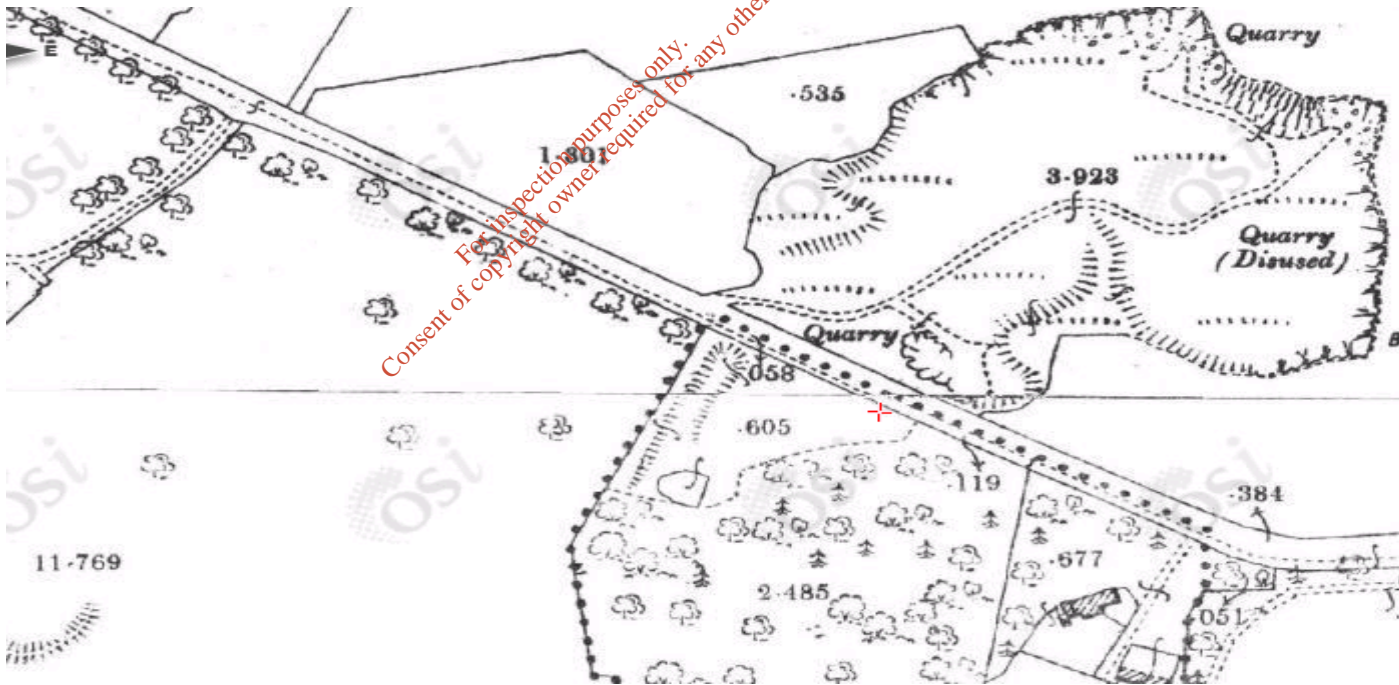


Figure 1: 1890 25 inch map of the quarry.

Drainage: there are a small number of surface drainage ditches on site. The most important are those to the south west boundary of the site as much of the site drains to this area. There is a sump constructed in this area to which water and leachate can drain which is then pumped to a foul sewer for treatment. Due to the levels in the drainage ditches no liquid was draining off the site at the time of the site visit-see Figure 1 below.

There are locally wet spots in the land fill, these are located for the most part on the western sides of the site and occur where the soil layer does not allow water to percolate down wards. These areas are used by snipe as feeding areas.

One other drain occurs at the rear of the houses to east of the entrance gateway, this is a shallow drain and is partially filled with water. The drains and wet spots are notable in what is an elevated and well drained site. They are seasonal and would be likely to dry up in summer. The drains do not look as if they contained leachate. Examination of nearby farm drains down slope and outside the e Land fill did not show the presence of leachate.

On site vegetation: much of the site has been cleared due to works which include the construction of bore holes to monitor ground water. The remainder of the site has covering of ruderal vegetation with high proportion of nettles (*Urtica dioica*) reflecting the nutrient rich mature of the soil covering. The site has been used for grazing by horses. Thistles (*Cirsium arvense*) and Rosebay Willow Herb (*Chamerion angustifolium*) were also present on the site, with soft rush (*Juncus effuses*) in the wetter locations mentioned above. Some patches of scrub remain composed of mixes of Ash (*Fraxinus excelsior*), Rusty Willow (*Salix cinera* subsp. *Oleifolia*) and Sycamore (*Acer pseudoplatanus*). These remain towards the centre and east of the site.

Grasses had also colonised the site with common species such as Cocksfoot (*Dactylis glomerata*) while in the wetter areas with rushes and smaller amounts of Reed Canary grass (*Phalaris arundinaceae*) present. Photographs of the site prior to works showed it to be fully vegetated with species such as Angelica (*Angelica Sylvestris*) on damper parts of the site with Docks (*Rumex crispus*), Ragwort (*Senecio jacobea*) and Plantains

For inspection purposes only. No consent of copyright owner required for any other use.



Figure 2: the outlet from the site is shown in the top centre of the photo. The fall in the drain is back towards the site itself and towards a sump constructed in the western boundary area of the landfill.

Soils: The site has a covering of mineral soil of varying depth of between 4 and 10 cm. Beneath this there is layer of stone which had been used as covering material over the waste body. The underlying geology of the land fill site is described as

On site birds: Birds on site were snipe, blackbird, jackdaw and robin and wood pigeon which overflying the site. No nests were seen in any tree or shrub within the site. Rooks nests were seen on nearby trees outside the site to the south.

Adjacent land: land to the north and west is improved grassland used for grazing by horses. The southern boundary is a roadway, while to the east is housing with gardens backing onto the site.

Ground layer: beneath the tree lined hedges the ground layer was ivy (*Hedera helix*) and Brambles (*Rubus fruticosus*) which formed an impenetrable layer in parts.

Trees/hedgerows: the Southern boundary is a mature tree line with Cypress forming the tree layer with an understory of whitethorn. The road side bank is covered with ivy. Mixed with the Cypress are Ash and Sycamore. To the east of the entrance gate timber panelling provides a boundary which farther east leads to row of Cypress, with sycamore and willow present in side them.

The eastern boundary is a mix of garden fencing and open space, while the northern boundary is an open boundary with limited growth of Whitethorn. The eastern boundary consists of mature cypress tress with a drain on the inside.

On site habitats: presently the predominant habitat is presently disturbed ground (Spoil and Bare Ground ED2) while on the fringes of the site, towards the roadside edge. The cypress from a treeline (WL2). There are isolated patches of Scrub with willow present (Salix Spp.) These would correspond with habitat category WS1. Drainage ditches are also present (FW4).

Local Habitat Importance of the site: none of the on site habitats have any links with annex habitats and are of types that are available in the wider countryside. Despite this the presence of an area which if allowed to regenerate naturally and would have a local seed bank with a low intensity management regime would be beneficial and of local importance particularly on the outskirts of an urban area.

Additional comments: the site has been heavily disturbed with large areas of bare soil caused by machinery traffic. Some of the scrub growth on the site had been cleared way during works. No signs of badgers or other animal dwellings were found on site. The surrounding fields to the north and west were also checked for signs of badgers e.g. tracks or latrines or feeding signs, none were found.

Recommendation: following remedial works that vegetation be allowed to regenerate naturally on site. When the grass land layer has developed it would be possible to allow limited grazing, which prevent regeneration of scrub but would also allow structural diversity in the sward which would be useful for invertebrates and small mammals. .

T O Neill HO.

For inspection purposes only.
Consent of copyright owner required for any other use.