

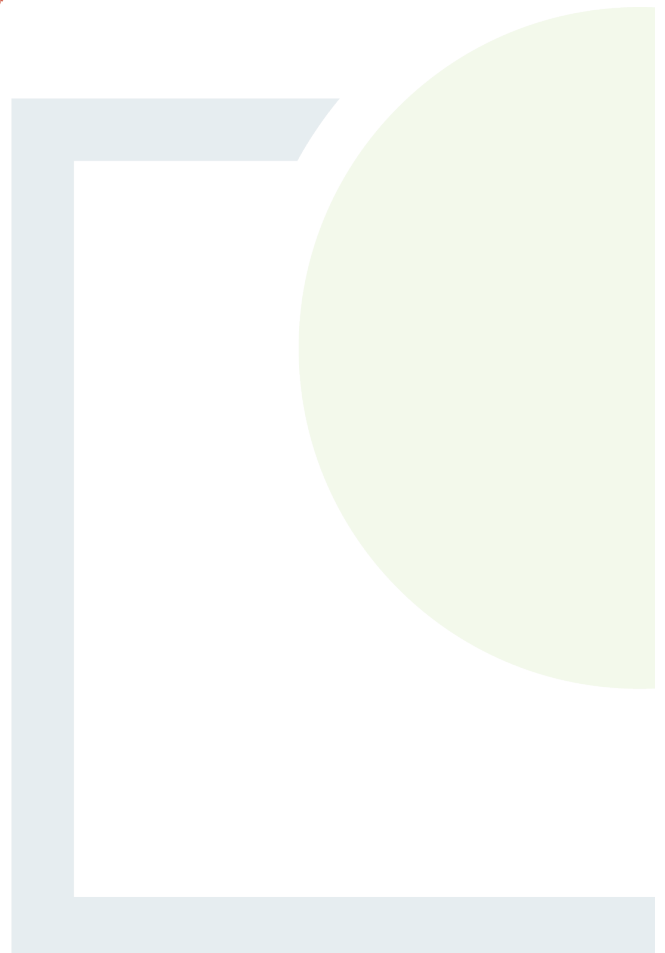


CONSULTANTS IN ENGINEERING,
ENVIRONMENTAL SCIENCE & PLANNING

APPENDIX 1

Finding of No Significant Effects Report

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



| Finding of No Significant Effects Report | |
|--|--|
| <p><i>Name and location of the Natura 2000 sites</i></p> | <ul style="list-style-type: none"> • Lower River Shannon cSAC (002165) • Kerry Head SPA (004189) • Stack's to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA (004161) • River Shannon and River Fergus Estuaries SPA (004077) • Moanveanlagh Bog cSAC (002351) |
| <p><i>Description of the project or plan</i></p> | <p>The proposed works are comprised of the following elements:</p> <ul style="list-style-type: none"> • Engineered cap, • Subsurface drainage (on cap), • Surface drainage with outfall, • Barrier System, • Landfill gas collection system, • Landfill Gas Management (including Risk Assessment), • Groundwater, surface water and landfill gas monitoring regime. <p>The remediation plan is presented in drawing P1766-0100-0003 which is appended to the Tier 3 Risk Assessment, located in Appendix 2 of this report.</p> <p>The site is currently grazed by cattle. Following remediation works the site will continue to be farmed.</p> |
| <p><i>Is the Project or Plan directly connected with or necessary to the management of the site (provide details)?</i></p> | <p>No.</p> |
| <p><i>Are there other projects or plans that together with the project of plan being assessed could affect the site (provide details)?</i></p> | <p>A planning search limited to applications submitted within the townlands overlapping and surrounding the historic landfill site was conducted on the 20th August 2020. No other projects of a scale or type that could act cumulatively with the proposed remediation works at the historic landfill site are proposed or consented in the townlands overlapping and surrounding the Ahascra historic landfill.</p> <p>Other Historic Landfills</p> <p>Within Ahascra historic landfill's 15km buffer there are 5 European sites. Of these 5 European sites, one or more is located within the 15km buffer of 5 other historical landfills which require remediation works (see Table 6-2 below for more information).</p> <p>Lower River Shannon cSAC</p> <p>The ground waterbody of the Ahascra historic landfill overlaps with that of the Lower River Shannon cSAC (002165). The existing capped area will not be removed and there will be no excavation of the interred waste body. As there will be no excavation into the interred waste body and as the new engineered cap will be placed immediately on top of the existing cap, remediation works will not result in the production of additional leachate.</p> |

Finding of No Significant Effects Report

With regards to surface water and leachate, there is an indirect hydrological link between Ahascra historic landfill and the Lower River Shannon cSAC (002165) via the River Feale. As the waste waterbody will not be excavated remediation works will not increase leachate production and existing levels of leachate entering perimeter drainage channels will not be affected during remediation works.

Surface water runoff will leave the site via existing perimeter drainage channels. The surface water runoff will contain low – negligible levels of suspended solids which will be diluted within the receiving drainage channels. On entering the River Feale/SAC (1.7km direct distance) suspended solid levels will be low- negligible. Within the River Feale any suspended solids will be further diluted to negligible levels. Receiving habitats (qualifying interests) of the SAC are estuarine habitats and are non-sensitive to suspended solids (see Table 6-1). The Drainage channels are maintained habitat of low Ecological value which will not provide feeding or breeding habitat for the transitory qualifying interests (Sea Lamprey, Brook Lamprey, River Lamprey, Salmon and Otter) of the SAC. As water will be diluted further at the River Feale discharge point and suspended solid levels will be negligible, there will be no significant effect on commuting salmonids (Sea Lamprey, Brook Lamprey, River Lamprey and Salmon) or feeding/breeding otter (transitory qualifying interests of the SAC). As there will be no effect on the qualifying interests of the Lower River Shannon cSAC (002165) due to surface water runoff, there can be no cumulative in combination effects with any other historical landfill sites. See Section 6.5 for more information.

Ahascra historic landfill site will not have any impact on the Lower River Shannon cSAC (002165) and therefore will not result in cumulative / in combination effects with any other historical landfill sites.

Other European sites

Kerry SPA (004189), River Shannon and River Fergus Estuaries SPA (004077), Stack's to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA (004161) and Moanveanlagh Bog cSAC (002351) are located 7.9km or greater from Ahascra historic landfill site and do not receive waters from the site. Ahascra historic landfill and associated drainage channels do not provide suitable habitat for any of the SPAs special conservation interests and Moanveanlagh Bog cSAC (002351) does not have any transitory qualifying interests. There will be no effect on the aforementioned European sites from the remediation of Ahascra historic landfill and the proposed project will not result in cumulative / in combination effects with any other historical landfill sites.

See Section 6.3 for more detailed information.

Assessment of Effects

Describe how the project or plan (alone or in combination)

During Remediation Works

During remediation works emissions created by the works will be comprised of soil sediment. Soil sediment will be produced during:

| Finding of No Significant Effects Report | |
|---|--|
| <i>is likely to affect the Natura 2000 site</i> | <ul style="list-style-type: none"> the use of 18,400m³ of subsoil used to reprofile the site as well 4,600m³ topsoil which will provide a growing medium for grass. the installation of the barrier system which will require vertical cut-offs on all boundaries (outside the area of the interred waste body). during the installation of landfill gas management elements located on the surface of the cap (will not disturb the interred waste body). During the installation of an outflow in the bank of a perimeter drain. <p>The soil sediment produced during remediation works will mainly be limited to site and it is likely that a low - negligible amount of suspended solids will enter the site's perimeter drainage channels ² which feed into the River Feale/the Lower River Shannon cSAC (002165).</p> <p>At present leachate is likely to escape from the site and enter groundwater and surface waters. During remediation works leachate will continue to be produced. The existing capped area will not be removed and there will be no excavation of the interred waste body. Remediation works will therefore not result in the production of additional leachate.</p> <p><i>After Remediation Works</i> Following remediation works leachate will continue to be produced and enter groundwater for a time. However, remediation works will prevent leachate outbreaks and they will also prevent rainwater from infiltrating the interred waste body therefore reducing the potential for leachate to be produced.</p> <p>During the establishment of the grass layer (will take several weeks) on the newly engineered cap, surface water runoff will contain suspended solids. Levels of suspended solids will be minimal and will be produced for a limited period.</p> |
| <i>Explain why these effects are not considered significant</i> | <p><i>During Remediation Works</i> <u>Lower River Shannon cSAC (002165)</u> The Lower River Shannon cSAC (002165) is located within the same ground waterbody as the historic landfill. As discussed above, remediation works will not increase the levels of leachate entering the underlying ground waterbody.</p> <p>The Lower River Shannon cSAC (002165) has an indirect hydrological link via perimeter drainage channels which feed into the River Feale which forms part of the Lower River Shannon cSAC (002165). The SAC is located 1.7km (instream distance) from where the closest perimeter drain leaves the site and enters the River Feale/SAC. At present it is likely that leachate via leachate outbreaks is escaping from the historic landfill site into perimeter drains. Remediation works will not increase the amounts of leachate entering perimeter drains and is therefore not discussed further.</p> |

² Site surveys indicate that the perimeter drains were not free flowing meaning that waters entering the drainage channels may take some time to enter the River Feale with periods of time where drainage channels may not feed into the River Feale. A worst-case scenario has however been taken with the assumption made that there is a hydrological connection between the drainage channels and River Feale/ Lower River Shannon cSAC (002165).

Finding of No Significant Effects Report

Soil emissions will however be produced during remediation works. Supporting documents for the SACs conservation objectives [(NPWS, 2012b), (NPWS, 2012c)] indicate that the section of the River Feale/SAC which will receive waters from the historic landfill is estuarine in nature and of the SACs 13 qualifying interests, two habitats are found in the receiving waters (discharge point) of the River Feale/SAC; Estuaries [1130] and Mudflats and sandflats not covered by seawater at low tide [1140]. The receiving estuarine habitats/qualifying interests are not overly sensitive and suspended solids and suspended solid emissions will be further diluted from low - negligible to negligible at the discharge point. There will therefore be no effect on these two qualifying interests. Between the discharge point and where the River Feale enters the Shannon Estuary/SAC, there is a 6.4km instream distance. Discharge entering the Shannon Estuary will be further diluted and there will therefore be no effect on any other qualifying interests for which the SAC is designated due to emissions.

There are 6 aquatic transitory qualifying interests of the SAC which are comprised of Sea Lamprey, Brook Lamprey, River Lamprey, Salmon and Otter. Salmonids are highly unlikely to breed within the drainage channels that link the historic landfill to the River Feale as aerial photography indicates the drainage channels are maintained and are therefore highly unlikely to contain suitable breeding habitat for salmonids. Salmonids located in the lower reaches of the River Feale will be commuting up or down the River Feale. Suspended solid emissions entering the River Feale will be low - negligible and will be further diluted to negligible levels at the discharge point. There will therefore be no direct or indirect effect on salmonids due to emissions.

Otter is unlikely to inhabit the drainage channels that link the historic landfill to the River Feale as the drainage channels are a maintained habitat of low ecological value and are therefore highly unlikely to support the prey that otters feed upon. The River Feale and the Shannon Estuary are highly likely to form part of the SACs otter populations territory. Suspended solid levels entering the River Feale will be low - negligible and will be further diluted to negligible at the point of discharge. There will be no direct or indirect effect on otter due to emissions.

Due to distance and dilution factor there will be no direct or indirect effect on the qualifying interests of the Lower River Shannon cSAC (002165) due to emissions.

Kerry Head SPA (004189)

Kerry SPA (004189) is located adjacent to the Lower River Shannon cSAC (002165) along the shore of the Shannon Estuary. Suspended solid levels entering the Shannon Estuary will be negligible and further diluted. The SPA is located 2.3km away (direct distance) from where the River Feale discharges into the Shannon Estuary. Due to distance and dilution factor there will be no direct or indirect effect on special conservation interests of Kerry SPA (004189) due to emissions.

Finding of No Significant Effects Report

River Shannon and River Fergus Estuaries SPA (004077)
 River Shannon and River Fergus Estuaries SPA (004077) overlaps with the Lower River Shannon cSAC (002165) within the Shannon Estuary. Suspended solid levels entering the Shannon Estuary will be negligible and further diluted. The SPA is located 9.9km away (direct distance) from where the River Feale discharges into the Shannon Estuary. Due to distance and dilution factor there will be no direct or indirect effect on special conservation interests of the River Shannon and River Fergus Estuaries SPA (004077) due to emissions.

Stack's to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA (004161)
 Stack's to Mullaghareirk Mountains West Limerick Hills and Mount Eagle SPA (004161) is located 9.9km (direct distance) from the historic landfill site, is upstream of the River Feale and overlaps with sections of the Lower River Shannon cSAC (002165). The SPA does not receive waters from the River Feale. There will therefore be no effect either directly or indirectly to the SPAs sole special conservation interest, the Hen Harrier due to emissions.

Moanveanlagh Bog cSAC (002351)
 Moanveanlagh Bog cSAC (002351) is located 12.2km (direct distance) from the historic landfill, upstream of the River Feale and does not receive waters from the River Feale tributary. There will therefore be no effect either directly or indirectly to the three bog habitats for which the SAC is designated for due to emissions.

After Remediation Works

Lower River Shannon cSAC (002165)
 During the establishment of the grass layer (will take several weeks) on the newly engineered cap surface water runoff will contain suspended solids. Levels of suspended solids leaving the historic landfill via outflow into the perimeter drainage channel will be minimal (far less than during the construction phase) and on entering the drainage channel will be diluted to negligible levels. Due to the limited amount of soil runoff there will be no effect on Shannon cSAC (002165) due to emissions.

| Name of Agency or Body Consulted | Summary of Response |
|----------------------------------|---|
| - | Consultation was not undertaken due to the positive nature of the works (in terms of leachate) and the lack of potential significant effects. |

Finding of No Significant Effects Report

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 |
|--|---|---|---|
| <p>This evaluation was completed by Fehily Timoney and Company</p> | <ul style="list-style-type: none"> Information on the designated nature conservation sites within 15km and whist hydrological link outside the 15km of the study area was obtained from the NPWS website and metadata available online from the NPWS mapping system (http://webgis.npws.ie/npwsviewer/). Information on the waterbody catchments in the development area was obtained from the Water Framework Directive Water Mapping Information System http://gis.epa.ie/Envision OSI Aerial photography and 1:50000 mapping. Information on the historic landfill site was obtained from the Tier 2 and 3 Risk Assessment report located in Appendix 2. Parameters and Results from monitoring are located in Appendix 3 European site synopsis are located in Appendix 4. | <p>Appropriate Assessment Screening (Stage One)</p> | <p>Environmental Protection Agency</p> |