Remedial Environmental Impact Assessment Report
Volume 1 of 3 – Non-Technical Summary

For

UMMERA GRAVEL PIT
MACROOM, COUNTY CORK

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Remedial
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Report

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TABLE OF CONTENTS

PAGE

TABLE OF FIGURES

PAGE

1. INTRODUCTION

1.1. The Applicant

The applicant for this substitute consent is Drimoleague Concrete Works Ltd (DCWL). DWCL is based at Bredagh Cross, Drimoleague where it operates a concrete ready-mix and concrete products manufacturing facility. It also operates a few quarries / gravel pits in the West Cork region, including Ummera gravel pit. DCWL is involved in the supply of raw materials for the construction industry in West Cork. These projects require the use of large volumes of concrete, aggregate and concrete products. The supply of such raw materials is critical for the continued development of, for example, residential housing and infrastructure on both a local and regional scale. The company provides an important service in meeting the development needs of the region.

1.2. The Substitute Consent Development

The substitute consent development is a gravel pit on a landholding extending to 20.22 hectares. The substitute consent application extends to an area of 10.5 hectares, in which gravel extraction has been carried out since the 1940's. DCWL, through its affiliated company (Murnane & O'Shea Ltd) has been operating at the Ummera site since the late 1970's through lease arrangements. DCWL purchased the lands in 2004.

In 2012 and in accordance with the Planning & Development legislation, Cork County Council carried out audits of quarries and gravel pits in the County to determine their status / compliance with environmental legislation. The Council issued its determination for the Ummera gravel pit in August 2012 requiring that DCWL apply to An Bord Pleanala for substitute consent, to include a remedial Environmental Impact Statement (now referred to as an Environmental Impact Assessment Report). This determination was appealed to An Bord Pleanala. In February 2014. An Bord Pleanala upheld the Council's determination requiring DCWL to apply for substitute consent. DCWL sought a judicial review of An Bord Pleanala's decision. The case was adjourned a number of times pending the outcome of the 'the McGrath case' as to the constitutionality of certain provisions of the Planning & Development legislation. The McGrath case was decided in favor of An Bord Pleanala

1.3. The Consultants

Keohane Geological & Environmental Consultancy (KGEC) is a Cork-based consultancy specialising in geological and environmental sciences. In recent years, KGEC has prepared planning applications and/or EISs (EIARs) for several quarry developments in counties Cork, Limerick and Kerry. Damian Brosnan Acoustics carried out the noise assessment for the development; Dr. Charles Mount carried out the archaeological impact assessment; and Atkins prepared the biodiversity chapter.

2. DESCRIPTION OF THE PROPOSED DEVELOPMENT

2.1. The Site

The gravel pit is located in a rural setting in the townland of Ummera, approximately 2.5km to the northeast of Macroom. The site location is shown on Figure 2-1. The gravel pit is in a landholding of approximately 20.22 hectares, of which 17 hectares was included for registration under Section 261 – refer to Figure 2-2. These 17 hectares of land is not interrupted by any natural or man-made boundaries. The remaining 5ha included in the landholding is separated from the 17 hectares by public roads (and include the public roads in the land folio). Areas within the 17 hectares not worked are used for grazing and host the old farmhouse and farm buildings. Part of the landholding is located between the public road and the Clashavoon Stream; the original settlement pond for the gravel pit is in this area. The surrounding land use is predominantly grazing.

The site is accessed from the National Primary Route N22 via regional road R618, local road L-3423-0 and local road L-3423-20. The pit entrance is from local road L-3423-20.

The site varies in elevation between approximately 85mOD and 115mOD. The site entrance is at an elevation of approximately 85mOD and rises to the east to approximately 115mOD. The floor of the gravel pit is at an elevation of approximately 91mOD.

The gravel pit is within the catchment of Sullane River, a tributary of the River Lee. It doesn't have any direct connection with designated sites within 15 kilometres. There is distant connection to designated sites in the River Lee and Cork Harbour downstream of the Inniscarra Dam, but too remote for the gravel pit to have had any impact.

2.2. Need for the Development

DCWL requires a supply of aggregate for its concrete manufacture in Bredagh Cross and for its customers in the West Cork area. The substitute consent process is needed to enable DCWL apply for the continued further development of the gravel pit.

2.3. Selection and Alternatives Considered

The section of alternatives site is not relevant for the substitute consent application.

2.4. Development Description

Ummera gravel pit is a small-scale operation, generally manned by one full-time operator. The site manager operates the front-end loader, loading the washing plant and loading aggregate into trucks. Additional employees and machinery are used when required for topsoil stripping, cleaning out the settlement ponds or carrying out repairs or maintenance on the plant / machinery.

The processes and activities that have been and are being carried out at the gravel pit are summarised as follows:

1. Topsoil and overburden are stripped from the area from which gravel is to be extracted. Stripping is carried out using an excavator. The topsoil and overburden are used to provide temporary screening around the working area.
2. The deposit is variable in content (variable grain size), so is worked in different areas to achieve the desired blend of aggregate sizes to suit demand. Silt / clay layers occur in the deposit and these are set aside using an excavator.
3. Gravel is loaded into the washing plant using the front-end loader. The washing plant screens the aggregate into a number of size fractions, including sand, 6 to 10mm stone, 10 to 20mm stone, 20 to 50mm stone and 50mm^{+} stone.
4. Silts and fines are carried to the settlement ponds by the wash water. The ponds are cleaned periodically, and the silt is stored to the west and east of the of the ponds where it dries out. The silt will be used for future restoration. Occasionally, there is demand for this silt for use as bedding sand for underground utilities.

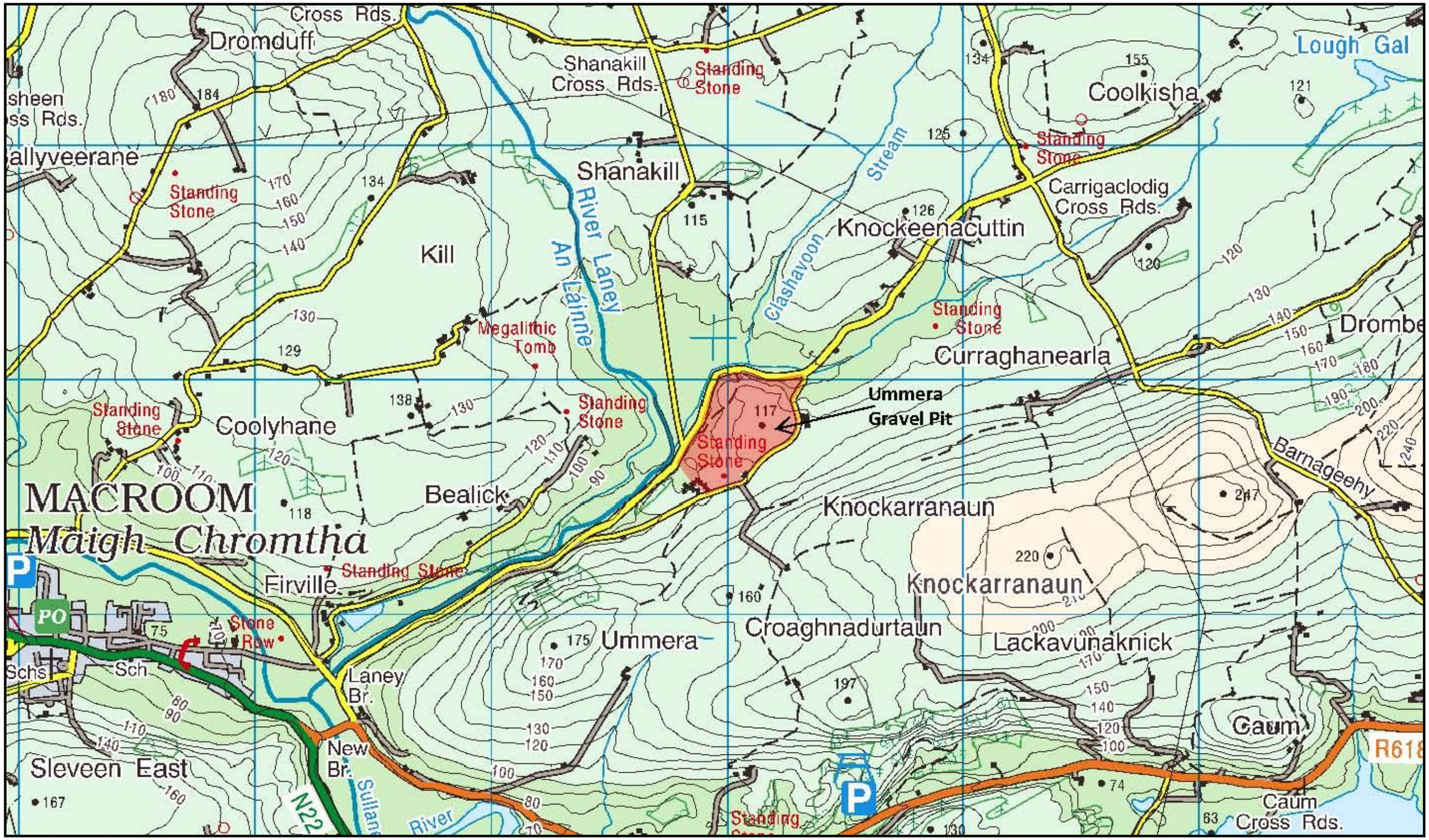

Figure 2-1: Site Location Map

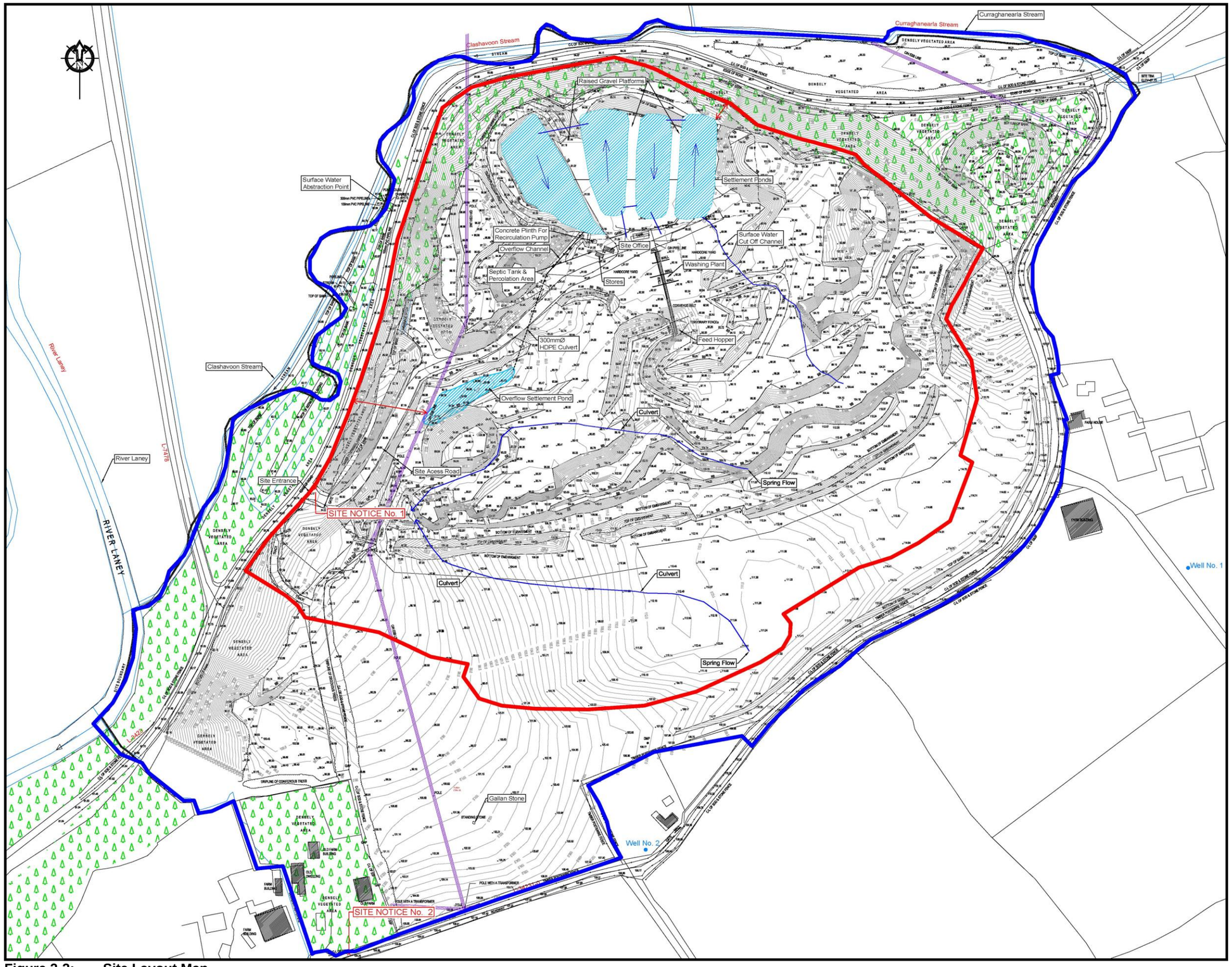

Figure 2-2: Site Layout Map

3. LANDSCAPE – IMPACTS AND MITIGATION

3.1. Existing Environment

The gravel pit is in a rural environment dominated by rolling undulating grazing land in the catchment of the Laney River. The landscape comprises low rounded hills of Old Red Sandstone enclosing fairly broad undulating river valleys. While there is generally an appearance of roughness in this landscape type, the area in the immediate environs of Ummera are less so, with good quality agricultural land prevailing. The Laney River valley is lined with mature woodland. More rugged elevated topography occurs >5km to the north and northwest.

The Ummera gravel pit, which forms part of the existing landscape, is largely screened from most vantage points behind local topography and mature stand of trees along the northern, western and south-western perimeters. The gravel pit has been a part of this landscape for over 70 years.

3.2. Landscape Impacts

The Ummera gravel pit has and will continue to have an impact on the landscape and visual character of the surrounding areas, and in the main these impacts will be perceived as negative. However, as the gravel pit has been operational for many decades it is now considered part of the landscape, not an intrusion into it. Changes have and will continue to arise primarily from:

- The removal of existing agricultural lands.
- Continued extraction operations.
- Temporary storage of aggregates and silt washings.
- Construction of site infrastructure, such as screening berms.

These changes have and will impact primarily on residences and roads adjacent to the east side of the gravel pit and the more distant views from the west along local road L-7478. The gravel pit is well screened and not considered to have any significant impacts on views from other perspectives.

3.3. Conclusions of Landscape & Visual Impact

The degree of the visual impact occurring has changed over the life of the gravel pit. The degree of this impact is strongly dependent on the perceptions of the surrounding population. As the gravel pit operations were well established at the site in 1990 (DCWL would have been established at Ummera since 1978), the perceived impacts have been much less than that of a greenfield site. The gravel pit is well screened from most perspectives with only limited views of the pit available from a few locations. The continued acceptance of extraction operations at Ummera will be largely dependent on good site management, maintenance of effective screening provided by trees and berms, and control of emissions (namely noise and dust).

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4. POPULATION & HUMAN HEALTH – IMPACTS AND MITIGATION

4.1. Impacts and Mitigation Dwellings

There are 14 houses within 500 metres of the DCWL landownership boundary and of these 5 houses are within 500 metres of the substitute consent boundary. The closest houses are located along the local road running along the eastern and southern boundary of the gravel pit. Screening berms have been constructed along the site perimeter along the road to protect the amenity of these houses.

4.2. Impacts and Mitigation - Noise

The gravel pit is in a rural area dominated chiefly by road traffic noise. Daytime residual levels of 33-38dB measured during a survey undertaken in October 2019 are likely to be representative of levels throughout the 1990-2019 period. There are no receptors on the applicant's holding, and no receptors directly adjoin the pit working area. The nearest receptor lies approximately 60 metres from the working area.

Current operations at the applicant's pit are similar to that undertaken since 1990. Operations are relatively small in scale, with a single loader used to load occasional trucks. Noise emissions arise from the loader, trucks, an aggregate washing plant, and a tracked excavator used at intervals to strip overburden and clean out settlement ponds. Specific noise levels currently attributable to site operations are less than 40dB at receptors, rising to 42dB at the nearest farmhouse. These levels are reasonably representative of specific noise levels at these locations throughout the 1990-2019 assessment period. Levels are markedly lower than the 55dB criterion relevant to the site, and this limit is highly unlikely to have been exceeded at any time in the past. The current and historic impact is determined to be neutral to slight adverse, due to low amplitude, frequency of occurrence, and soundscape context.

4.3. Impacts and Mitigation - Land

The application covers an area of approximately 10.5 hectares of mostly active pit in a landholding of 20.22 hectares. The surrounding land use supports good quality agricultural land used mostly for dairy and beef farming. The advance of the extraction activities has resulted in the loss of agricultural lands – approximately 5 hectares over the assessment period.

4.4. Impacts and Mitigation -Tourism

The gravel pit is in a rural settling distant from any population centres, local amenities (GAA clubs, churches, schools, parish halls, etc.) or tourist destinations. No direct or indirect significant impacts on tourism or local amenities have occurred, are occurring or are envisaged to occur in the future. It is not visible from any of the tourist assets in the Mid Cork area. No significant direct or indirect impacts have occurred or are occurring, so remedial mitigation is not required.

4.5. Impacts and Mitigation – Traffic

The gravel pit is serviced by undivided local primary and local secondary roads. Most trucks leaving the site turn left to access the regional and national road network, near Macroom. The sightlines for trucks entering from, and leaving to, the south are good, but less so for trucks leaving the site and going right. The volume of truck traffic varies with demand but has been up to 10 loads per day over the assessment period.

A number of improvements to the traffic safety at the gravel pit have been carried out over the assessment period. The most notable is the relocation of the site entrance from the northwest corner to its current location. Further improvements proposed are the paving of the access road to the pit, which will improve the public road condition at the entrance, and the installation of another warning sign on the approach from the south.

4.6. Impacts and Mitigation – Cultural Heritage

The archaeological and cultural heritage component of a remedial Environmental Impact Assessment Report of the development at Ummera, County Cork consisting of a paper and fieldwork study was carried out in September - October 2019. There are no items of cultural heritage, monuments or buildings of heritage interest known from the substitute consent area. There are no direct or indirect impacts on any known items of cultural heritage, archaeology or buildings of heritage interest in the substitute consent area or the vicinity and no remedial measures are required.

5. ENVIRONMENTAL ASPECTS – IMPACTS AND MITIGATION

5.1. Impacts and Mitigation – Biodiversity

This biodiversity chapter identifies, quantifies and evaluates potential effects of the extraction operation at Ummera on habitats, species and ecosystems. It considers impacts to ecological receptors that have occurred, are occurring, or which can reasonably be expected to occur because of the gravel works at Ummera. It identifies where mitigation measures have been put in place to offset or reduce the identified impacts. This assessment draws on baseline information identified from desk-based study, baseline surveys and evaluation of the ecological features.

A desk study was carried out to collate the available existing ecological information on the site. Field surveys included consideration of semi-natural habitats, flora terrestrial mammals, birds, bats and aquatic ecology (including the potential for occurrence of freshwater pearl mussel habitat in the Clashavoon Stream and River Laney, downstream of the gravel pit).

The site is not located within a Natura 2000 site (SAC or SPA) or a site of national importance (i.e. proposed Natural Heritage Area); nor are there any such sites in the immediate environs of the site. The nearest Natura 2000 site is the Gearagh SAC / SPA located on the River Lee upstream of its confluence with Sullane River (and effectively upstream of the site). The nearest pNHAs, Lough Gal pNHA and Glashgarriff River pNHA, are both in the catchment of the Glashgarriff River, which discharges to the River Lee near Coachford (downstream of the site) – i.e. no connectivity with the Ummera gravel pit.

No Annex I habitats or species (as defined under the EU Habitats Directive) are present on site. Semi-natural habitats are in general of local ecological value. From a review of aerial photos and historic maps, the current site supports a greater diversity of habitats than those which characterise the surrounding agricultural landscape (i.e. improved grassland; hedges & ditches) and that likely characterised the site in the past.

Very low levels of bat activity were recorded during the 2019 bat survey and the site was not determined to be of importance for bats; species noted were Common pipistrelle; Leisler's bat and Soprano pipistrelle. Ummera gravel pit is not an important foraging site for bats. No badger setts were identified on site. Sand martin nest occur in exposed sand faces on site.

Water quality data is not collected on the Clashavoon Stream by the EPA. Small stream risk scores calculated as part of this study for sampling stations upstream and downstream of the site both indicate that the Clashavoon Stream is at Risk of not achieving Good status (i.e. SSR scores, based on sampling of aquatic macroinvertebrates). EPA water quality data (Q-values) is presented from stations on the River Laney upstream and downstream of the confluence with the Clashavoon. These data suggest that water quality downstream of the site is slightly better than the upstream station on the River Laney; with the worst case of water quality (Q2-3, Poor in 1995) noted on the upstream location. Currently water quality downstream of the site is Q4-5, High (2018). While negative impacts on the Clashavoon Stream have been noted, in for example correspondence, from the Fisheries Board, these data also highlight broader patterns of negative impacts on water quality in the catchment of the River Laney since 1973.

Freshwater pearl mussel has been recorded in the River Laney. Apart from limited records there does not appear to have been a systematic survey of pearl mussel within the full catchment of the River Laney. There was no evidence of pearl mussel in the Clashavoon Stream (2019 field surveys). As noted there have been negative pressures on water quality in the wider River Laney catchment. These together with any release of silt from the site would have had negative impacts on pearl mussel within the river since the 1940s. However, it is not possible to identify the relative scale of impact associated with different pressures in the absence of historic data (i.e. agriculture, forestry, septic, tanks, road runoff, quarrying etc.). Improvements to the water management system have been undertaken since the 1980's to reduce or eliminate potential risks to the Clashavoon Stream as detailed in the main rEIAR.

5.2. Impacts and Mitigation – Surface Water

The gravel pit is located adjacent to the Clashavoon Stream, which is a tributary of the Laney River. It joins with the Laney River at the southwest corner of the landholding. Water is abstracted from the Clashavoon Stream for washing gravel. Water is recirculated through on-site settlement ponds, which have been moved and modified during the assessment period to reduce pollution risk to the Clashavoon Stream.

As noted, surface water management has been improved over the assessment period and in recent years to minimise the risk of polluting the Clashavoon Stream. Runoff water from the gravel pit is treated in the on-site settlement ponds prior to recirculation. Additional improvements are proposed to further reduce the risk to the receiving waters. These works will include paving the site access road and improvements in the storage and dispensing of fuel. Surface water management will be kept under review and improvements made when necessary.

5.3. Impacts and Mitigation – Geology & Groundwater

The gravel pit is underlain by overburden glacial deposits consisting of tills and gravel, and mudstone, siltstone and sandstone bedrock. Depth to bedrock decreases across the site from the northwest to the southeast; based on non-intrusive surveys done in 2003 this ranges from 30m to 5m. Gravel deposits have been worked at the site since the 1940's. It is estimated that approximately 500,000m^3 of aggregate has been removed from the site. There are no geological heritage sites affected by the activities at the gravel pit.

Groundwater is found in the bedrock, which is classified by Geological Survey of Ireland as locally important (southern part of site) and poor (north-western corner of site). Groundwater wells are used for domestic and agricultural supply in the local area. Groundwater springs are encountered in the gravel and interpreted to be perched water flowing on clay and silt layers.

The most significant impact occurring as the site is the permanent removal of gravel with the consequence of increased aquifer vulnerability. Storage of diesel presents a risk to groundwater quality. Groundwater wells on adjoining properties have not been impacted by the works.

Remedial mitigation will include commencement of restoration and improvements in fuel storage and dispensing. Monitoring of groundwater levels in wells at neighbouring dwellings will continue to ensure impacts on wells is not occurring.

5.4. Impacts and Mitigation – Air, Climate & Climate Change

The long-term weather patterns at the site reflect regional conditions affecting south-western Ireland. These patterns are predominantly low fronts from the west and southwest in winter months and more settled conditions during the summer months. Monitoring of air quality on a regional basis indicates that Ummera has an air-quality index of 3, indicating good air quality.

The main impact on air quality associated with extraction activities is the release of wind-borne dust to the surrounding lands, which resulted in complaints from the nearest residents in the 1990's / 2000's. Mitigation measures were implemented at that time to limit dust emissions, including the installation of a sprinkler system. While the system has fallen into disrepair, dust has not been an issue at the gravel pit in recent years. The unpaved access road has been a source of fugitive dust when raised by trucks entering and leaving the site. The paving of the access road will improve matters, reducing or eliminating this as a source of dust emissions.

Strict adherence to operational procedures incorporating best practice will ensure dust migration from the site will be minimised. The topographical and local climatic factors will result in the majority of airborne dust generated at the site being deposited within the site boundary. In addition, the environmental monitoring programme will highlight elevated dust emissions so that mitigation measures can be reviewed, or new ones introduced. The operations at the gravel pit has not / is not affecting climate change. If increased rainfall occurs, as predicted by climate change proponents, the levels of dust will be reduced.

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6. CONCLUSION – INTERACTIVE IMPACTS AND CONCLUSION

Ummera gravel pit has been assessed over the period 1990 to present on a range of environmental aspects as required by the regulations. The assessment considered the impacts that have occurred, are occurring or which may occur as a result of the Ummera gravel pit. The interactions between impacts associated with each aspect of the environment with the other aspects of the environment is discussed in the main rEIAR report, along with the avoidance, reduction and mitigation measures employed at the gravel pit. Remedial mitigation measures have also been identified where improvements can be made to the site infrastructure and processes. An aggressive, but realistic, timeline is set for the implementation of these remedial measures.

The interactions of all environmental factors indicate an overall positive development providing a vital raw material for the construction industry in the south-western region of County Cork. The acceptance of the Ummera gravel pit is dependent on a continuation of good site management and adoption of improvement to practices, when required, to ameliorate impacts to the local community.