KILSARAN CONCRETE

Section 34 Planning Application

Existing Quarry at Barryscourt and Rossmore Tds, Carrigtohill, Co. Cork

NON-TECHNICAL SUMMARY

Environmental Impact Assessment Report

Continuance of Use of Existing Quarry

JUNE 2021

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1.0 INTRODUCTION

1.1 Development Overview

This Environmental Impact Assessment Report (EIAR) provides supporting information to accompany a Planning Application to Cork County Council by Kilsaran Concrete Unlimited Company in respect of the continued use of the existing permitted quarry at Barryscourt & Rossmore Townlands, Carrigtohill, Co. Cork. The application also includes provision for out of hours operation of the concrete plant up to 40 occasions per year.

The application area extends to c. 24.7 hectares and comprises an existing operating quarry permitted under planning permission Plan. Ref. 03/4570. The application site is indicated on an extract from the 1:50,000 scale Ordnance Survey Discovery series map in **Figure NTS1**.

The planning application is for continuance of use of the existing quarry to the permitted extraction level of -40mOD. The application is made in accordance with the requirements of the Planning and Development Regulations 2001-2012 (as amended).

An Appropriate Assessment Screening Report has also been prepared in support of the planning application and is provided as a separate document.

1.2 The Applicant

The planning application and accompanying supporting documentation has been prepared by SLR Consulting Ireland (SLR) on behalf of Kilsaran Concrete Unlimited Company (hereafter referred to as 'Kilsaran').

Founded in 1964, Kilsaran is a wholly Irish-owned company, whose business is primarily in the production of materials for the construction industry.

The company manufactures paving and walling, pre-mixed dry products, ready-mix concrete, pre-cast concrete products, concrete blocks, trowel-ready mortar, aggregates, asphalt and macadam, hard core and fill materials for the Irish and UK markets as appropriate. The company also undertakes surfacing contracts for road construction, building and civil engineering works.

In recent years, the company has focused on a substantial expansion programme to its Paving and Walling division and Pre-mixed Dry Products facilities. Kilsaran has also expanded into the UK market with a Supply and Distribution depot added in Manchester serving the Northwest of England and the greater UK market.

The company now employs over 600 people directly; it operates twelve hard rock quarries and a similar number of sand and gravel pits. Kilsaran manufactures various concrete products from 20 locations, mainly in the east, midlands and south of the country. The company also has three asphalt plants located strategically within extractive sites throughout its operational area.

The company's intention in preparing and submitting an application to continue the use of the existing permitted quarry is to continue to provide a source of aggregates and construction materials to Cork and the surrounding region.

1.3 Site Location

The existing quarry is located approximately 1.7 km south of Carrigtohill in Co. Cork, refer to NTS1.

The quarry, to which this planning application refers, lies within Barryscourt and Rossmore townlands. The plan extent of the application site is also outlined in red on Figure NTS2 together with the existing site layout.

1.4 Surrounding Land-Use

The land-use consists predominantly of agricultural land with fields under arable production and permanent pasture but also includes a number of other quarries and golf courses. The Lagan quarry adjoins the eastern boundary of the site.

The surrounding landscape is characterised by Cork Harbour and the numerous islands, tidal estuaries, loughs and channels that make up Cork Harbour.

The city of Cork is the largest urban area with industrial and commercial development extending eastwards from the city along the N25 to Carrigtohill with other smaller rural settlements and isolated farmsteads scattered along the roads and lanes throughout this area

1.5 Site Access

The established and permitted access to the quarry is via the N25 Cork to Waterford national road, the R624 regional road and the local road network, refer to Figure NTS1.

1.6 Consideration of Alternatives

Rossmore Quarry is located in an area favourable to extraction activities, due to, *inter alia:*

- Established long history of extraction at this location;
- Proven high quality limestone reserves;
- Located with access to the regional and national roads network;
- Best practice industry standard extraction and processing methods are used;
- Low development costs because infrastructure already in place at the site and the application is for continued use to a long-established quarry area.

1.6.1 Do Nothing Alternative

If no further works within the planning application area were carried out, the existing site would be restored to natural habitat after-uses as per the restoration proposals.

1.6.2 Alternative Sources of Aggregates

In the medium term there are no real alternatives to the current land-based sources of construction aggregates.

Until End of Waste criteria in respect of Construction & Demolition (C & D) materials is agreed, these recycled materials cannot be relied upon and for the foreseeable future there are no real alternatives to primary land-won aggregates.

Notwithstanding the above, the volume of C&D waste suitable for recycling into secondary aggregates would be considered very low in comparison to the overall demand for aggregates. The demographic spread of the population results in only the large urban centres potentially being capable of generating sufficient volumes of construction and demolition (C&D) waste to justify a commercial operation producing secondary aggregates going forward.

In the longer term (>25 years), there may be some scope for extraction of sand and gravel from marine sources.

In the absence of significant volumes of aggregates from recycled / secondary and marine sources, land-based deposits (such as the proven reserves at Rossmore) will continue to be the main source of construction aggregates in Ireland, including Cork and the surrounding region.

1.6.3 Alternative locations

The current planning application is for continuance of use of the existing permitted quarry at Rossmore, Co. Cork.

The alternatives available to the Applicant relate to:

- Further development (into lands that do not currently have the benefit of planning permission for quarrying) and final restoration of the existing established quarry;

  or

- Development of a new replacement 'greenfield' quarry in Cork to serve the established clients and markets in this region.

At the current time, there is no suitable alternative replacement quarry location available to the applicant in Cork. It is generally accepted that the overall timeframe for development of a 'greenfield' quarry site (from initial site selection, land acquisition, preparation of a planning application and accompanying EIAR, through planning process and site development to extraction of aggregates) takes between 5 and 10 years.

Notwithstanding the above, continued operation of the existing quarry would be beneficial in planning terms by eliminating the need for:

- Extracting additional materials from other quarries within the county, should the applicant be unable to develop a new 'greenfield' site in the event that the existing quarry ceases operation. This would result in faster depletion of aggregate resources at these other quarry locations and potentially result in future intensification of those operations;
- Development of a 'greenfield' site at some other location within the county where there is little or no previous extractive industry landuse;
- Haulage of materials by road from other quarries within, and outside the county, with potentially longer haulage distances and increased traffic levels on the wider road network.

The development of the existing limestone quarry at Rossmore will assist in continuing to provide extraction from a proven aggregate resource within an established operation, with no significant increase in environmental emissions.

This development is not like a factory for example that can be located at many locations; this is a resource tied development. Aggregates can only be worked where they exist and where the environmental effects of working such resources can be managed to an acceptable level.

The extent of the deposit at Rossmore Quarry has long been established since the 1990's. The continued use of the quarry development will work the remainder of this identified reserve that is located within the existing permitted quarry extractive operational site that has a proven track record of environmental / planning compliance.

Although aggregates can only be worked where they exist, some will argue that the value-added facilities such as the readymix concrete, concrete block and mortar plants could be located anywhere. It is considered best planning practice to co-locate these facilities as close to, but preferably at the major raw materials source i.e. within quarry developments. This conforms to the principles of sustainable development as it minimises energy consumption in the form of haulage requirements, excessive handling and centralises waste collection. The requirement for duplicated facilities is also removed, such as multiple offices, weighbridges etc.

On the basis of the above, it is considered that continued use (and final restoration) of the existing quarry, subject to continued implementation of best environmental management practice and compliance with appropriate planning controls (i.e. planning conditions and recommended emission limit values for the sector) is preferable in an overall planning context, compared to the development of a new replacement 'greenfield' site at some alternative location in the Cork region.

1.6.4 Alternative Designs / Layouts

The proposed development is for continuance of use of the existing quarry within the existing extraction area to the permitted level of -40 mOD. The development will not result in any changes or increases in the extraction area. Alternative design / layouts are not considered relevant in this instance.

1.6.5 Alternative Processes

Kilsaran are a company with expertise and experience in the field of quarrying, aggregates production, concrete manufacturing, road surfacing materials manufacturing and road making.

This planning application is for continuance of use of the existing permitted quarry. Kilsaran use industry standard and best practice blasting techniques to fragment the limestone. This fragmented limestone is processed using mobile crushing & screening plant located within the quarry extraction area, and using fixed processing plants, in line with best practice for the sector. Alternative processes are not considered relevant in this instance.

2.0 DESCRIPTION OF THE DEVELOPMENT

2.1 Proposed Development

The proposed development being applied for under this current planning application is shown on **Figure NTS3** and is for continued use previously granted under Cork County Council Ref. No 03/4570 and will consist of:

- Continuance of use of the existing quarry development within an overall application area of c.24.7 hectares;
- Extraction to the level of 40m below Ordnance Datum, within the extraction area previously permitted under Plan. Ref. 03/4570;
- Final restoration of the quarry void area and an area of 3.8 hectares to the north adjacent to the public road.

Permission is also being sought for an extension to the existing operating hours for the readymixed concrete plant for out of hours operation of the plant up to a maximum of 40 occasions per year, to supply critical and strategic building / infrastructure / maintenance projects whose construction requires supply of concrete outside normal plant operating hours.

2.2 Existing Quarry

The existing permitted quarry operations comprise extraction of limestone using blasting techniques; processing (crushing and screening) of the fragmented rock to produce aggregates for concrete production (readymix and blocks), road construction and site development works.

Manufacturing facilities at the overall site include a concrete manufacturing facility (readymix and blocks), and a mortar plant. Ancillary facilities include the office, weighbridge, canteen, toilets, bunded fuel storage areas and a garage / workshop.

The quarry is a key strategic source and supplier of construction materials for Cork and surrounding region.

2.3 Quarry Extraction Area

The quarry will continue to develop within the existing extraction area to the previously permitted level of -40 mOD. An outline of the proposed extraction plan in Figure NTS3.

2.4 Duration of Extraction

The duration of quarrying activities at the application site will largely be dictated by the rate at which approximately 5.2 Million Tonnes of limestone is extracted from the site. There are many factors which will influence this, including, but not limited to the:

- Prevailing economic climate and related construction industry output;

- Distance of construction projects from the facility (and scale of activity).

In light of these and other variables, calculation of production rates and duration is not an exact science. It is anticipated that the annual extraction rate will range from 250,000 – 500,000 Tonnes.

A planning permission duration of 20 years is sought for the extraction and processing period and a further two years to complete final restoration of the site.

2.5 Extraction and Blasting

The extraction of limestone at Rossmore Quarry is carried out using industry standard blasting techniques. A blast monitoring programme is in place and Kilsaran evaluates blast design and monitoring results to ensure protection of residential amenity of the area.

2.6 Stability of the Quarry

Industry standard slope angles, bench heights, and bench widths will continue to be used for extraction operations at the site.

2.7 Stone Processing

The processing of the extracted rock, into aggregate products, will consist of crushing and screening by mobile processing plant located within the quarry void and the fixed aggregate processing plant.

2.8 Topsoil and Overburden

No topsoil stripping will be required as part of the proposed development, as the extraction will continue within the existing quarry extraction area. There is a small area of overburden soil in the northwest of the extraction area to be moved to the landscaped screening area in the north of the overall site.

2.9 Manufacturing

Existing value added manufacturing facilities at the quarry include concrete (readymix and blocks) and mortar.

2.10 Ancillary Buildings and Infrastructure

Ancillary facilities at the quarry include the office, weighbridge and weighbridge office, staff welfare facilities, toilets, wheelwash, and bunded fuel storage area. In order to track and record the amount of material exiting the quarry and to ensure legal loading weights, all HGV traffic is directed across the existing weighbridge.

2.11 Safety and Security

Vehicular access to the property at Rossmore and the application site is through a single entrance. There is no other vehicular access to the application site. The access gate is locked outside operational hours. At the present time, the property boundary is secured by post and wire fencing, hedgerows, screening berms, and palisade fencing at the entrance. Entry to the existing facility is controlled and CCTV cameras are installed at the site.

2.12 Groundwater and Surface Water Management

Conventional sump pumping is used within the quarry to control surface water and groundwater inflows into the quarry extraction area.

After being pumped from the quarry floor any excess treated water not used for other site activities, such as dust suppression etc, is directed to the existing water management system.

Measures are implemented to ensure that excess water discharges are managed and controlled in accordance with the existing discharge licence ref. WP(W) 10/18 that permits discharge of excess treated waters to groundwater.

2.13 Fuel & Chemical Storage

Fuel and chemical storage will continue at the overall quarry site. The only chemicals to be stored on site for the quarry that will have the potential to cause water pollution are lubricating oils, hydraulic oils and diesel fuel. All these chemicals are and will continue to be stored in the following manner:

- Suitably certified tanks within areas bunded to a capacity of 110% of the tank;
- No pipe work will go through the bund at any point to reduce the risk of leakage;
- Surface water from bunds will be pumped out through a suitable oil interceptor.

2.14 General Waste Management Plan

Kilsaran as a member of the Irish Concrete Federation commits themselves to the principles of the Federations Environmental Code. The code states:-

> *"ICF members will minimise production of waste and where appropriate consider its beneficial use including recycling. They will deal with all waste in accordance with the relevant legislation and other controls in place, including using waste contractors with valid Waste Collection Permits"*

Potential waste produced and the measures used to control it are described as follows:-

- Scrap metal – a designated scrap metal area is demarcated on site and the build-up of scrap is controlled by the regular removal by licensed scrap metal dealers.
- Used Oil and Oil Filters – any waste oil/oil filters that may arise from servicing of fixed or mobile plant is removed from the site by a licensed waste contractor.

- Used Batteries – similarly all used batteries are removed from site for collection and recycling by a licensed waste contractor in accordance with the Waste Management Regulations.
- Domestic Style Waste (Canteen Waste) – domestic waste generated at the offices and employee's facility is and will continue to be collected by a licensed waste collection contractor.
- Sewage Effluent – this is disposed of by the existing wastewater treatment system.

2.15 Operating Hours

In accordance with condition 5 of the existing planning permission (Plan. Ref. 03/4570) quarry operations will be carried out between 07.00 – 19.00 hrs Monday to Friday; and 08.00 – 16.00 hrs Saturday. The quarry will not operate on Sundays or Bank Holidays, except in emergency situations.

As stated above, permission is also being sought for an extension to the existing operating hours for the readymixed concrete plant for out of hours operation of the plant up to a maximum of 40 occasions per year, to supply critical and strategic building / infrastructure / maintenance projects whose construction requires supply of concrete outside normal plant operating hours.

2.16 Employment

The proposed continuance of the existing quarry development will secure the continued employment of 31 people (Quarry Manager, two Shippers, three technicians, one sales, one fitter, five engaged in contract crushing and up to 18 company and owner truck drivers associated with the combined haulage for quarry products).

The readymix concrete/mortar batching and block making operation will continue to provide employment for the 9 people (two block production and seven company drivers for concrete and concrete blocks))

Therefore, the proposed development will secure the continued employment of 40 people for the duration of the extraction development i.e. 20 years.

2.17 Lighting

Sufficient lighting is / will be provided at the entrance and the ancillary processing and plant area to ensure safe operations during winter periods.

2.18 Landscaping & Boundary Treatment

The existing landscaped screening berms will be maintained around the perimeter of the quarry extraction area. The existing boundary fencing will be maintained, and hedgerows will be strengthened or fortified by additional planting, where required.

2.19 Environmental Management and Monitoring

Kilsaran have implemented an environmental management system (EMS) at Rossmore Quarry.

Extraction, processing and ultimately restoration activities at the application site require a number of environmental controls to eliminate or minimise the potential nuisance to the public arising from the extraction and processing operations. The existing environmental control measures in place at the site are outlined in the relevant EIAR Chapters. The existing operations at the site are currently regulated by conditions attaching to Cork County Council Plan Ref. No 03/4570.

The quarry has an established environmental monitoring programme and results of the environmental monitoring programme are submitted to Cork Co. Council on an annual basis to Condition No. 54 imposed under Plan Ref. No. 03/4570. Environmental water, noise and dust monitoring is carried out on a regular basis, to demonstrate that the development is not having an adverse impact on the surrounding environment.

2.20 Quarry Restoration

A restoration plan has been prepared for the planning application area. This restoration approach is consistent with the restoration concept previously permitted under Cork County Council Plan Ref. 03/4570. The restoration scheme is shown on the restoration plan **Figure NTS4.**

The planning application area will be restored to natural habitat afteruse, which is one of the beneficial after uses listed in the EPA Guidelines: 'Environmental Management in the Extractive Industry' (2006). This restoration scheme will assist in enhancing the biodiversity of the site and local area. The restoration will be achieved by implementation of the following measures:

- Creating a water body within the final quarry void as the groundwater level rebounds to its natural level, on permanent cessation of extraction operations.
- Retaining existing vegetation and provision of woodland and barrier mix planting around the perimeter of the quarry void;
- Leaving some areas for natural re-colonisation;
- Landscaping of the overburden storage area located in the northern part of the site, including hedgerow and woodland mix plating.
- All existing boundary fences and hedgerows will be retained to ensure that the site is secure.

2.20.1 Site Management and Supervision

The Applicant will clearly define the management responsibility for the site restoration work and will ensure that this person has the necessary information (from the planning application) and authority to manage the whole restoration process. Relevant staff will be briefed on the scheme and will be adequately supervised / controlled. A system of record keeping for the key restoration activities will be put in place.

2.20.2 Long Term Safety and Security

Existing hedges surrounding the development will be gapped up and thickened where required. These, combined with fencing and the secure and locked entrance gates to the development will prevent unauthorised third party access.

2.20.3 Long Term Surface Water and Groundwater

The existing quarry extraction area will flood naturally to form a water natural habitat. There is no requirement for any active long-term surface water or groundwater management at the site.

2.20.4 Decommissioning of Plant and Machinery

Redundant structures, plant equipment and stockpiles will be removed from site on permanent cessation of extraction activity. Machinery and buildings will either be utilised by Kilsaran on other sites or be sold as working machinery or scrap.

As part of the overall decommissioning process, all fuel and oil storage tanks within the existing site will be removed from the site by a licensed waste contractor. Therefore, there will be no potential for fuel, oil or sewage to cause long-term water pollution following completion of extraction activities.

2.20.5 Aftercare and Monitoring

There will be no on-going requirement for monitoring noise or dust after extraction, processing and manufacturing operations have ceased. Site inspections will be carried out after restoration works are completed to ensure the final site restoration as implemented is functioning.

3.0 EXISTING ENVIRONMENT, EFFECTS AND MITIGATION

3.1 Population and Human Health

The review of population is based on a Small area ID 047077003 and the electoral division (ED) of Carrigtohill. The change in population from 2011 to 2016, as per the Census 2016, for the electoral division, County Cork, Munster and the State shows a marginal increase in population for the Small area ID 047077003 with a much greater increase in the wider ED of Carrigtohill. Much of the development within this ED has taken place north of the N25. In 2016, the total population in County Cork was 417,211, of which Males numbered 206,953 and Females were 210,258 The census results indicate that the rate of population growth in the intercensal period in Carrigtohill has fallen below trends at the county, provincial and national level. However, this was preceded by substantial population growth between the 2006-2011 census periods of 36.72%.

According to the results of the 2016 Census, of the 5,227 people aged 15 years or older in Carrigtohill ED, some 3,294 were at work, 34 were looking for their first job and 277 were unemployed. Others were students, working in the home, retired, unable to work or other. The population of Carrigtohill and County Cork categorised by occupation at the time of Census 2016 shows that the population of Carrigtohill is more likely to be engaged as managers, directors, and senior officials; and in associate professional and technical occupations than the population of the wider county. The population of Carrigtohill is also less likely to be engaged in skilled trades occupations but more likely to be engaged as process, plant and machine operatives than the County as a whole.

The Pobal HP Deprivation index is Ireland's most widely used social gradient metric, which scores areas in terms of affluence or disadvantage. The index uses information from the census, such as employment, age profile and educational attainment, to calculate this score. The index is used by various state agencies and government departments to target resources towards disadvantaged areas. The 2016 Pobal HP Deprivation Index shows Carrigtohill with a score of 6.20 which in terms of affluence is marginally above the national average.

Rossmore Quarry is a significant source of raw materials for the construction sector. The continued development of proven limestone aggregate reserves at the site is required to ensure that Kilsaran meets the demands of the market(s) they have built up in the region, including supply, to the local construction industry, infrastructure projects and Local Authorities. The proposed development is of strategic importance in relation to the construction of new housing in particular and this is underlined by national objectives in relation to house building. The recently adopted National Planning Framework targets the delivery of 550,000 additional households in Ireland to 2040 (National Policy Objective 32). This is a medium-term, temporary, direct and positive effect on the local and regional economy. The proposed development will secure the continued employment of 40 people for the duration of the quarry operations. This is a medium-term, direct and positive effect on employment.

The potential adverse effects include those related to noise, vibration, dust, visual impact and traffic. Each of these matters, and associated management / mitigation measures, is addressed in the Environmental Impact Assessment Report (EIAR) and summarised in this Non-Technical Summary. Continuation of use of the existing quarry is not likely to have any significant effects on tourism / amenity assets, or on human health.

The environmental monitoring programme implemented at the overall site confirms that the quarry operations have operated and continue to operate within the recommended dust, noise and vibration limit values set out in best practice guidelines for the sector and conditions attached to planning permissions.

3.2 Biodiversity

An Ecological Impact Assessment has been carried out to inform the wider Environmental Impact Assessment process and production of an Environmental Impact Assessment Report to accompany the planning application by Kilsaran for continuance of use of the existing quarry.

The proposed continuation of use of the quarry at Rossmore, Co. Cork will result in localised effects on the ecology of the Site. The active quarry extraction area will continue to operate under the requirements similar to those set out in the existing planning permission.

There will be no effect on sites designated for nature conservation (Great Island Channel SAC 001058 and Cork Harbour SPA 004030) as a result of the continued use and operation of the permitted quarry. The scrub around the perimeter of the Site will be retained and will not be impacted.

The proposed project development and ongoing operations will result in the removal of exposed faces provided by stockpiles of fine aggregates and sand banks which provide nesting habitat for sand martins. The effect of the loss of habitat within the Site will result in displacement of the bird population using these habitats. The effect of the loss of habitat on the bird population would be significant at the Townland Level.

All hedgerow management will be carried out outside of the bird nesting season (1st March – 31st August inclusive). Where active sand and fine aggregate stockpile faces have been colonised by sand martins all work will cease on these faces from 1st March – 31st August inclusive. The measures recommended by the Royal Society for Protection of Birds (RSPB) for protection of sand martins using operational quarries will be implemented.

Overall, the residual effects on biodiversity are not anticipated to be significant.

A separate Appropriate Assessment Screening Report has been submitted as a separate document within the planning application documentation.

3.3 Land, Soils and Geology

There has been a change in land use from agricultural land to extractive industry, aggregate processing and manufacturing within the overall site. There is no further land take required as part of the proposed development that relates to continuance of use of an existing quarry.

A geological appraisal to assess the soils and geology within the overall site has been carried out. The appraisal comprised a review of available geological literature and maps, and geological site investigation work.

The Teagasc soil mapping for the Irish Forestry Soils (IFS) mapping project, indicates that the soils in the vicinity of the site are characterised by deep and well drained Acid Brown Earths and Brown Podzols, underlain by glacial till. The soils at the site have been removed in the past to facilitate quarrying activities and are currently stored in the northern part of the site awaiting restoration. It is not proposed to remove any soils as part of this proposal to continue the use of the existing quarry

The GSI geology map Sheet 22 (East Cork - Waterford) shows major geological faults running north south in the vicinity of the site. The northern part of the site is underlain by the Carboniferous Clashavodig Formation Limestone, while the section where the quarry void is located in the Carboniferous Little Island Formation which is comprised of massive and crinoidal fine Limestone. Both formations are fine grained limestones. The Little Island Formation is described in the GSI

Geological memoirs (1995) as being comprised of a uniform 500m thick succession of mudbank Limestone. The proposed development at the site involves the continuance of use of the existing quarry in the Little Island Formation Limestone, from its existing floor level to the existing permitted floor level of -40 mOD. The Little Island Formation Limestone is the main geological unit which has been quarried at the site.

The GSI database (www.gsi.ie) shows the closest karst features to the site are two landforms east to northeast of the quarry. Goat Hole cave is located approximately 1.3 km to the north to northeast, and a spring is located approximately 1.6 km east of the quarry; both karst features are in in Ballintubbrid West townland. No significant karst features have been encountered at the quarry.

There are no designated Irish Geological Heritage sites at Rossmore and there are no sites of County Geological Interest within or immediately adjacent to the development.

The construction stage has been completed for the existing quarrying operations at the site. The operational stage of the quarry is the further extraction of the Limestone material within the permitted quarry footprint, over the proposed lifetime of the continuance of use of the existing quarry. During the operational stage, the limestone rock will be quarried and processed at the site under the continuance of use. Operations at the quarry will adhere to the Health and Safety Authority Safe Quarry Guidelines in relation to the Safety Health and Welfare at Work (Quarries) Regulations 2008-2019 and this will limit the potential for unplanned events such as instability of quarry faces or instability in adjacent lands. The residual impact of the proposed continued quarry operations on soils and geology will be low to imperceptible.

The restoration of the application area to natural habitat afteruse will have a positive impact on the biodiversity of the site and local area. There will be a residual impact associated with the long term loss of the original agricultural land (pre original quarry development) and this will be both a permanent and minor negative impact at site level.

3.4 Water

The planning application relate to continuance of use of the existing quarry to the permitted level of 40 metres below Ordnance Datum (OD). There is a water management system in place at the quarry. Extraction takes place below groundwater level. Surface water run-off from rainfall and groundwater inflows are collected in the quarry sump located on the eastern edge of the quarry floor and is discharged to groundwater via nearby ponds, under Discharge Licence, Ref. No. WP(W)10/18. There is also a surface water pond located in the northern part of the site. Surface water runoff from the yard area and block yard at the site goes to this pond. This collected surface water is used as water supply for the readymix plant at the site.

The site is within the Lee, Cork Harbour and Youghal Bay Water Framework Directive (WFD) catchment. The site is located in the Tibbotstown River WFD Sub-Basin. The Tibbotstown River flows through Carrigtohill and goes to Cork Harbour to the North of the site and Fota Island. Due to topography, any surface water runoff from the local area around the site goes directly to Cork Harbour.

According to the Geological Survey of Ireland, the bedrock is classified as a Regionally Important Aquifer which is karstified and dominated by diffuse flow (Rkd). A regionally important aquifer is a bedrock aquifer unit capable of supplying regionally important abstractions (e.g. large public water supplies), or 'excellent' yields (>400 m^3/d). The continuous aquifer unit generally has an area of >25 km^2. The vulnerability at the proposed development is extreme (X), with rock near the surface.

The quarry is located within the Midleton Groundwater Body (GWB), referring to the Dinantian Carboniferous limestone bedrock units. The GWB has an area of 130 km^2 and the site is located to the south of the GWB. The pure unbedded limestones of this GWB are highly productive.

The regional groundwater flow direction in the area is expected to be from higher ground to the north towards the coast to the south. Localised groundwater flow directions within the quarry will be impacted by the drawdown caused by the pumping regime.

Hydrogeological investigations were undertaken in 2003 at the quarry to determine groundwater conditions at the site, as part of the original 2003 EIS. A series of groundwater wells were drilled with depths ranging from -4.4mOD to -45.9mOD. A pumping test were undertaken in the weathered zone (below - 34mAOD and assessed water inflows in the zone of weathered limestone. As such the results from the pump test are considered to represent the worst case scenario for groundwater ingress to the quarry during extraction to the permitted level of -40mOD. Four groundwater monitoring wells, GW1, GW2, GW3, and GW4, were installed at the quarry in 2019 and groundwater levels have been monitored since May 2019.

There are no Public/Group Water Supply Scheme boreholes in the vicinity of the quarry and there are no surface water abstractions for group schemes in the vicinity of the site either. Irish Water supplies dwellings in the area around the site with a mains water supply from Tibbotstown Public Water Supply (PWS) scheme. The Tibbotstown scheme draws raw water from a stream and small reservoir located approximately 5km to the north of the site.

A domestic well survey has been undertaken in the vicinity of the quarry. Information from the households indicates that the vast majority of properties in the area are connected to main water supply.

Existing measures are in place to mitigate any potential adverse impacts from quarrying and the processing of stone, readymix concrete production and block making at the quarry, including:

- A hydrocarbon separator installed at the refuelling area.
- There is no discharge from the quarry to any surface water course;
- There is no direct discharge of surface water runoff at the site to the freshwater pond;
- Storm surface water runoff from the quarry void percolates naturally to the ground on the floor of the void. A berm prevents any storm runoff going directly to the channel along the southern edge of the quarry floor which goes directly to the sump;
- Prevent storm surface water runoff from the quarry void going directly to the groundwater sump at the site;
- Fuel at the site is stored in a covered and bunded fuel tank;
- There is an impermeable hard stand area for refuelling which drains to a recently installed hydrocarbon separator;
- Oils, lubricants and waste oils are stored undercover in the workshop;
- Maintenance and repairs are undertaken, whenever possible, in the covered workshop;
- Undertaking regular visual inspection and testing of the integrity of tanks, drums, bunded pallets and double skinned containers;

- Ensuring all vehicle re-fuelling is undertaken on paved / hardstand areas, regardless of whether from existing fuel tanks or from mobile double-skinned fuel bowser;
- Ensuring all plant is regularly maintained and inspected daily for leaks of fuel, lubricating oil or other contaminating liquids / liquors;
- Traffic management system at the site to reduce conflicts between vehicles, and the potential risk of collisions and associated fuel spills or oil leaks; and
- Enforce speed limits across the site to further reduce the likelihood and significance of collisions.
- A spill kit (with containment booms and absorbent materials) is available on-site to contain / stop the migration of any accidental spillages, should they occur;
- There is a wheel wash for vehicles exiting the site to prevent mud and debris being carried onto the public road; and

Continued regular monitoring and review of the discharge water quality will indicate the effectiveness of pollution control and water management systems at the site. These mitigation measures will continue to be implemented at the site during the development of the quarry to the permitted level of -40 mOD.

In addition to the existing mitigation measures outlined above, the following proposed measures will be implemented during the quarry operational stage:

- A groundwater level monitoring program of the existing third party domestic water supply well identified during the well survey will be implemented (subject to permission), to ensure there is no impact on this well due to the continued operation of the quarry to the permitted level of -40mOD. If, in the unlikely event, that this supply well is impacted by the continued operation of the quarry, an alternative water supply will be provided.
- Water management: if a karst feature or conduit is encountered measures will be put in place to manage or reduce any additional inflows of groundwater to the quarry void, either by grouting the conduit or directing the flow to the quarry sump and discharging to groundwater through the existing licensed discharge point.

The restoration scheme for the quarry includes the removal of all plant and machinery. Any potential contamination sources (i.e. fuel, lubricants) will be removed.

The following water monitoring programme will be implemented to demonstrate that the development will not have an adverse impact on the surrounding water environment.

i) The discharge water quality will be monitored as per the conditions attached to the existing discharge licence;

ii) The discharge flow will be monitored on a continuous basis;

iii) Groundwater level monitoring will be continued in the existing groundwater monitoring wells;

iv) Groundwater level monitoring will be undertaken at the third-party domestic well (subject to permission) and this will be included in the groundwater level monitoring programme.

3.5 Climate

Ireland has a typical maritime climate with relatively mild and moist winters and cool, cloudy summers. The prevailing winds are south westerly in direction. The climate is influenced by warm maritime air associated with the Gulf Stream, which has the effect of moderating the climate, and results in high average annual humidity across the country. The area of least precipitation is along the eastern seaboard of the country in the rain shadow of the Leinster uplands.

The climate data recorded within the region of Rossmore Quarry has been sourced from Cork Airport. The existing quarry and continuance of use of same is not of sufficient scale to have any direct or indirect impacts on the regional or local climatic conditions.

Many developments have the potential to emit greenhouse gas (GHG) emissions to the atmosphere during the construction, operational and decommissioning phases of the development. GHG emissions at Rossmore Quarry have been calculated and are assessed as not significant in the context of existing national emission levels. Measures will be implemented to assess and/or monitor greenhouse gas emissions and to reduce these wherever practically possible.

The vulnerability of Rossmore Quarry to the effects of climate change has also been considered. Based on the development vulnerability assessment, measures to improve the resilience of the project to extreme rainfall, flood, flash flood, storms, and winds, are required. Specific climate change adaption / resilience measures are and will continue to be implemented at the quarry. The relative sea level rise (c. 25 cm over the next 50 years) and storm surges (50 to 100cm) will not materially impact on the quarry development over its operational life due to the topographic level differences between Rossmore Bay and the quarry property. Monitoring of the climate resilience measures shall be undertaken on a regular basis, and details of these reviews shall be recorded under the Environmental Management System (EMS) for the development

3.6 Air Quality

An assessment of fugitive dust emissions from the overall site has been undertaken. The assessment takes into consideration the potential sources, surrounding receptors, and the pathway between source and receptor in order to assess the magnitude of risk of impact without mitigation measures in place.

The main focus of the assessment is the potential impact on sensitive receptors from fugitive dust emissions from the following activities:

- transport – access road and internal haulage routes;
- extraction, storage and transfer of stone; and
- processing plants and facilities.

The sensitive receptors within 500 metres of the quarry extraction area were identified based on the land-use. A number of these receptors were assessed in greater detail, as they were considered to have a potential for a greater risk of dust impact.

In the absence of any mitigation measures, the risk of impact from dust emissions was determined to be 'acceptable ' to 'moderate adverse'. With the management / mitigation measures in place, the risk of dust impacts is reduced to 'insignificant / alight adverse' at all receptors.

A range of existing management measures have been and are in place to minimise the generation / migration of fugitive dust and to ensure that the extraction, processing and restoration operations comply with the relevant threshold values. These management measures are in accordance with the best environmental practice measures for the sector, and include:

- Processing plant is fitted with dust suppression (water sprays).
- All plant and machinery are regularly maintained.
- Dust suppression (e.g. water bowser) is utilised to suppress dust on internal haul road surfaces, in dry weather.
- Existing overall site boundary hedgerows have been maintained and encouraged over the years so as to help minimise the migration of dust beyond the overall site boundary.
- The perimeter screening berms constructed are vegetated mitigate against the migration of dust beyond the site boundary.
- Vehicle speeds are and will continue to be controlled on all internal haul roads. Internal traffic management measures have been implemented within the overall site including speed limit signage.
- Surfacing of access road.
- Wheelwash facility.
- Use of a road sweeper.

Dust deposition monitoring carried out at the overall site boundaries indicates that there is compliance with the recommended dust deposition emission limit value of 350 mg/m2/day (averaged over 30 days) set out in the environmental management guidance for the sector.

Based on the above, it is concluded that continuance of use of the quarry and related quarrying operations with continued implementation of the existing management measures, will not have a significant dust deposition impact on human receptors or sites designated for nature conservation (Great Island Channel SAC 001058 and Cork Harbour SPA 004030). Overall, the effects of the development on air quality are considered to be acceptable.

Dust deposition monitoring will continue be undertaken as part of the existing environmental monitoring programme at the quarry. Dust monitoring locations shall be reviewed and revised where and as/when necessary. The results of the dust monitoring shall be submitted to Cork County Council on a regular basis for review and record purposes.

3.7 Noise

Rossmore Quarry is an existing operation. Existing measured noise conditions associated with overall site activities (including ancillary activities) were applied to assess the potential noise and impacts at sensitive receptors and identification of potential impacts.

The existing noise monitoring carried out at the quarry confirms that noise levels recorded comply with the noise threshold limits set out in condition 33 of planning permission ref. 03/4570. This monitoring is representative of the cumulative noise levels from all activities on the site.

A noise assessment shows that the the potential impact of the existing activities within the overall site (including the application site), the predicted specific LAr, 1hr dB(A) are below the noise criterion limits for daytime at all the nearest noise sensitive locations. There will be no operational changes of noise associated with the existing activities in the application site and the likely noise levels that would be generated by the manufacturing and ancillary plant operations at the overall site will not change. No further mitigation measures are required.

To determine the noise impact generated by the proposed out of hours operation of the ready-mix concrete plant , a further noise prediction assessment was carried out to calculate the levels of noise at the nearest noise sensitive receptors. the cumulative long-term noise impact from the proposed development (without mitigation) is determined to be minor at the two nearest residential dwellings and negligible at all other residential receptors. With mitigation - enclosure of the concrete mixing unit as currently, the residual noise associated with the out of hours operation of the concrete plant reduces to negligible at all residential receptors.

With respect to ecological receptors, noise levels measured at the Rossmore site boundary from all quarry operations do not and will not exceed the noise guidance limits of LAeq 55dB and maximum noise emission levels are below LAmax 80dB therefore there will be a negligible noise impact on the Natura 2000 / designated European sites (SAC / SPA). The predicted noise levels from the proposed out of hours operation of the readymix concrete plant will not exceed the noise guidance limits of LAeq 55dB and maximum noise emission levels are below LAmax 80dB therefore there will be a negligible noise impact on the Natura 2000 / designated European sites (SAC / SPA).

A number of existing mitigation measures are in place to minimise the generation and migration of noise, and these will continue to be implemented. These mitigation measures are in accordance with the best practice measures for the sector and include:

- Provision of screening berms and boundary walls / screen planting around the southern, western, and northern boundaries to act as acoustic barriers.
- Quarry haul roads are kept clean and maintained in a good state of repair, i.e. any potholes are filled, and large bumps removed, to avoid unwanted rattle and “body-slap” from heavy goods vehicles.
- Heavy goods vehicles (HGV’s) entering the overall site are required to have their tailgates securely fastened.
- All mobile plant used at the overall site has noise emission levels that comply with the limiting levels defined in EC Directive 86/662/EEC and any subsequent amendments.

- Processing plant is operated in a proper manner with respect to minimising noise emissions, e.g. minimisation of drop heights, no unnecessary revving of engines, and plant used intermittently is not left idling.
- Concrete mixing occurs in enclosed mixing pans within the enclosed ready-mix concrete batching house buildings (Provision of acoustic screening at noise source)
- Plant is subject to regular maintenance, i.e. all moving parts are kept well lubricated, all cutting edges are kept sharpened, the integrity of silencers and acoustic hoods is maintained.
- All plant at the overall site is fitted with effective exhaust silencers which are maintained in good working order to meet manufacturers' noise rating levels. Defective silencers are replaced immediately.
- Speed limits on internal roads are controlled by speed ramps and signage.

There is an existing noise monitoring programme in place at the site. The results of the noise monitoring are submitted to Cork County Council on a regular basis for record purposes.

3.8 Vibration

Blasting operations will continue in the existing quarry. Blasting-induced vibration is impulsive and transient in nature. A typical blast consists of a number of drilled blast holes into which are placed explosive charges. The charged holes are detonated individually by use of detonators, each with different delays.

The main reason for complaints from blast-induced vibration is usually attributed to the fear of damage and/or nuisance rather than actual damage or nuisance itself. The human body is very sensitive to vibration; this can result in concerns being raised at vibration levels well below the threshold of cosmetic damage to buildings or the levels stated in the existing planning conditions.

The frequency of blasts is dependent on market demand. The duration of a blast in terms of noise is of short duration, similar to a clap of thunder.

The following measures have been and are implemented at the quarry to minimise disturbances due to blasting operations. These mitigation measures are in accordance with the '*best practice / mitigation'* measures described in Section 3.2 of the DoEHLG (2004) guidelines.

- In accordance with condition 10 of the existing planning permission blasting is carried out between the hours of 11:00 hrs to 17:00 hrs from Monday to Friday. A blast must be carried out on site on the specified day, as concerns over security does not allow for explosives to be stored on site.
- There is no blasting carried out on Saturdays, Sundays or public holidays.
- Advance notification of blasting operations is provided to residents of dwellings within 500 metres of the blast location.
- Blast notification is also provided by pre and post siren warnings.

- All blasting operations are carried out by a certified 'shotfirer' in accordance with the relevant health and safety regulations.
- The optimum blast ratio is maintained, and the maximum instantaneous charge is optimised.

To avoid any risk of damage to properties in the vicinity of the site, the groundborne vibration levels from blasting do not exceed a peak particle velocity of 8 mm/sec, in accordance with the existing planning permission - condition 37.

A review of the blast monitoring results at the quarry indicate indicate that the air overpressure and the groundborne vibration levels comply with the threshold limit values set out in condition no. 37 of the planning permission ref. 03/4570.

On the basis of the historical and existing blasting results, and the distance between proposed development and receptors, it is concluded that continuing of blasting operations within the existing quarry will have no significant impact on any sensitive receptors.

Monitoring of blasts (both for groundborne vibration and air overpressure) have been and continue to be carried out at the quarry. The blast monitoring results have been and continue to be submitted on a regular basis to Cork County Council for record purposes. The scope of the blast monitoring has been and continues to be reviewed annually, and subject to agreement of Cork County Council, it may be amended in the light of previous monitoring results.

3.9 Material Assets

The local material assets in the vicinity of the overall site include residential buildings, historic buildings/monuments, road infrastructure, built services (ESB and water mains etc.) and waste management. Consideration of residential buildings; historic buildings / monuments and road infrastructure is assessed under the topics of Air Quality; Noise & Vibration; Cultural Heritage and Traffic.

The existing road access infrastructure, processing, manufacturing and ancillary development is in place and there will be no site establishment or preparatory works required. The proposed development will not require the installation of electricity, water supply, telecommunications or wastewater infrastructure. All of the necessary infrastructure is already provided within the overall site. Given that the proposed development does not require the provision of any additional built services and the overall site currently operates without significant adverse effects on built services, it is considered that the proposed development would not have any significant, adverse, direct or indirect effects on water supply, wastewater, telecommunications or electricity supply.

The proposed development relates to the continuation of extraction in the existing quarry. No construction stage arises and accordingly there will be no construction stage impacts. There are existing waste management arrangements in place in relation to general waste that would be generated by the staff working at the overall site. These arrangements will remain in place for the duration of the operational stage. Any waste generated by the operational stage works will be handled and stored in an appropriate manner and will be removed off site by an appropriately licenced waste collector. The limited volume of general waste generated within the overall site is appropriately handled. It is considered, therefore, that the impact of waste generation from the proposed development will be medium-term, temporary and insignificant.

3.10 Cultural Heritage

The cultural heritage component of the environmental impact assessment report for the proposed development at Rossmore Quarry consisted of desk-based assessment and field inspection undertaken within the overall quarry site.

The proposed development comprises continuance of use of an existing permitted quarry, within the permitted extraction area.

Examination of the Record of Monuments and Places for Co. Cork indicated that there are no Recorded Monuments located within the application area. The closest Recorded Monument to the application area externally is RMP CO075-072---- a Fulacht fia in Barryscourt townland. This monument is situated 0.6km northeast of the application area and is considered to be too far distant to be directly or indirectly impacted by the proposal.

The Cork County Development Plan 2014-20 and the Record of Protected Structures was examined as part of the baseline study. The review established that there are no Protected Structures situated within the application area. The closest structure Barryscourt Castle is situated 0.875km north-east of the application area and is considered too far distant to be directly or indirectly impacted by the proposal.

There will be no direct impacts on any known items of archaeology, cultural heritage or buildings of heritage interest in the application area or the vicinity. There will be no indirect impacts on any known items of archaeology, cultural heritage or buildings of heritage interest in the application area or the vicinity. No mitigation or monitoring measures are required in relation to cultural heritage.

3.11 Landscape & Visual

A landscape and visual impact assessment (LVIA) of the development at Rossmore Quarry has been completed in accordance with accepted guidance.

The visibility of the application area was initially assessed by a desktop study of ordnance survey mapping and available aerial photography followed by field survey.

The application area is currently partially visible from local roads along the shoreline of Great Island Channel and also along the regional road R624 at Belvelly Bridge near Foaty Island. Further south within the farmed landscape of Great Island, glimpse views are available of part of the application area at occasional isolated elevated locations in between breaks in the existing wooded vegetation. Glimpsed views of the application area are available from the farmed landscape to the north in the vicinity of Carrigtohill. This is due to the visual screening afforded by intervening promontories associated with Brown Island, Brick Island and Weir Island. Further inland to the north, the application area is partially visible in glimpsed views from elevated locations north of Carrigtohill. The viewing opportunities are intermittent and occasional, afforded at locations where breaks in existing mature vegetation arise.

Effects on visual amenity at selected viewpoint locations presented in the baseline are documented in the EIAR. From all of the viewpoints, the viewer would continue to see elements associated with the existing permitted quarry facility. The extraction activities including moving plant and machinery

would continue to be screened for the most part in views from the south by existing vegetation and perimeter earthworks at the boundaries of the application site. No proposed new structures or activities will be introduced. As a result, there would be scarcely any change to existing views at each viewpoint location however the visual effects currently experienced by viewers would be of longer duration.

The proposed development would occur in a landscape which features an existing quarry located within a designated High Value Landscape (HVL). The proposed development constitutes the continuation of existing permitted extraction activities resulting in the introduction of a permanent lake within the quarry void together as part of final restoration works. This waterbody would be substantially screened from the surrounding landscape by existing perimeter earthworks and vegetation along the site boundaries. There would be no change in terms of loss of farmland land cover or loss of landscape elements such as trees, hedgerows and woodland. Overall, the proposed development is deemed to be compliant with landscape policy set out in the County Development Plan.

During the Post operational stage following permanent cessation of extraction, plant and machinery will be removed, and the site will be restored in accordance with the Restoration Plan illustrated in Figure NTS4. This restoration will result in some beneficial effects on surrounding landscape and visual amenity compared with the current baseline.

3.12 Traffic

An assessment of the current and forecast traffic generation arising at Rossmore Quarry and the traffic impact on the capacity and operation of the receiving road network has been undertaken. The study examines site infrastructure and access arrangements serving the existing quarry site. Rossmore Quarry is an existing operational quarry the entrance to which is located on Local Road L3619 approximately 1 kilometre east of the junction of L3619 with Regional Road R624. Local Road L3619 is a single lane carriageway road subject to a posted speed limit of 80kph and considered to be in good repair.

The characteristics of existing site traffic generation have been established from a detailed examination of weighbridge data for 2019 and this forms the basis of the estimate of the traffic characteristics of the future proposed development.

The assessment of traffic impact relies upon baseline traffic flow data derived from traffic turning count surveys undertaken on the receiving road network in mid-2018. The traffic surveys include junctions along the current haul routes which principally include Local Road L3619 west to Regional Road R624 and to a lesser extent L3612 northeast to N25 Junction 4. The traffic surveys have been validated against weighbridge data to be representative of higher-than-average traffic activity arising at the quarry site.

Weighbridge data for 2019 shows the permitted development operating at a rate of extraction of 419,245t per annum and manufacturing approximately 46,000m^3 of concrete and 3.3M concrete blocks generated an average of 95 HGV trips per day. This equates to an average of approximately 9 No. vehicle trips per hour (±3) throughout the working day.

The existing permission is for a maximum extraction rate of 750,000t per annum. Were the rate of manufacture of value-added product to remain at current levels and the extraction rate to be elevated to the permitted 750,000t per annum rate then the hourly traffic generation rate would be

in the order of 15 HGV trips (±6) or potentially double those recorded in the 2019 weighbridge records.

Based upon the current reserves and the market for aggregates and value-added product it is expected that the future rate of extraction will be in the region of 250,000t to 500,000t per annum. The current proposal seeks permission for continuance of extraction of aggregates not at the current permitted rate of 750,000t per annum but at the current (2019) rate which ranges by month from an equivalent 250,000-500,000t per annum with an annual average rate of 419,245t (as per 2019). An allowance for an upper value extraction rate of 500,000t per annum will permit the quarry to operate at current levels whilst still retaining the flexibility to respond to market forces that fluctuate throughout the year.

The current permitted extraction rate of 750,000t per annum is 50% higher than that sought. The proposed development will give rise to a significant reduction in the potential traffic generation of the site from that currently permitted. Operating at the current recorded rate of extraction not exceeding 500,000t the quarry has an average extraction rate of 419,245t per annum and manufactures approximately 46,000m^3 of concrete and 3.3M concrete blocks and is calculated to generate an average daily HGV traffic flow in the order of 95 HGV trips per day which is a reduction of 76 HGV from the average traffic flow of 171 HGV trips that can potentially arise from the current development permitted under Plan. Ref. 03/4570 operating at the permitted maximum extraction rate.

The average traffic generation of the site is in the order to 95 HGV per day. In periods when demand for product is at the highest proposed value of 500,000t per annum the daily HGV generation can be calculated to be in the region of 120. Weighbridge data confirms that this elevated type of activity occurs for only two months of the year. Conversely where demand is low the weighbridge data shows that daily HGV traffic generation can fall as low as 69 per day (approximate representative annual extraction rate 200,000t).

Comparing proposed traffic generation with that permitted under Reg. Ref. No 03/4570 shows a potential reduction in the average traffic generation of the existing site in the order of 76 to 95 HGV trips per day. In practice the site is not operating at the permitted extraction rate of 750,000t per annum but is operating at an extraction rate equivalent to 500,000t per annum which in practice gives rise to an annual average extraction rate in the order of 419,245t per annum (as per 2019).

The existing traffic generation and that generation rate forecast under the current application equates to an average of approximately 10 HGV trips per hour which from analysis of weighbridge data and HGV traffic generation at other similar quarry facilities is expected to show a typical deviation from the average of approximately ±3 vehicle trips per hour over the typical operational hours for quarry operations.

The proposed continuation of extraction at the Rossmore facility, with reduced annual extraction from a permitted 750,000t to 500,000t per annum will generate levels of traffic approximately 33% to 50% lower than those currently permitted. In practice the proposed extraction rate is equivalent to that recorded in 2019 and would likely be experienced in present day post-pandemic. It follows that in practice the current proposal is for the continuance of operations at the current levels and in practice there will be no change in the current volumes of traffic generated on a day-to-day basis. Quarry traffic would continue to use the same haul routes so given the potential reduction, or in practice the maintenance of existing traffic generation levels at the site it follows that there will be no significant impact on the local roads network over that currently manifest.

The existing quarry traffic does not give rise to capacity issues at local junctions and there are unlikely to be capacity issues arising at the existing site access or the junctions on the haul route as a result of the proposed development for continuance of existing quarry operations.

The primary haul route it is generally considered to be in a good state of repair with no evidence of structural failure. There are some localised surface defects which require routine maintenance. All roads require a schedule of ongoing maintenance in order to remain serviceable. There is no proposed increase in the volume of traffic using the local road accordingly current annual maintenance costs are unlikely to increase since no additional traffic means there will be no additional wear and tear arising from the activities of the quarry. Given the historic use of these routes by the existing quarry it is highly unlikely that any specific road strengthening works would be required for the proposed continuance of development traffic at the same levels. Similarly, over the extended life of the quarry no additional maintenance works would arise on an annual basis over and above those currently manifest. It is however acknowledged that the current proposal will result in the extension of time over which the haul route is subject to quarry traffic. It must be acknowledged that inherent in the proposed continuance of quarrying activity is the extension of contributions and payments to the planning authority a proportion of which is allocated to the county schedule of ongoing road maintenance.

3.13 Interaction of the Foregoing

The interactions of the various potential impacts and mitigation measures have been covered, where applicable, under the relevant sections within the EIAR.

FIGURES

NOTES

1. EXTRACT FROM 1:50,000 O.S DISCOVERY MAP **NO. 80, 81 & 87**.

2. ORDNANCE SURVEY IRELAND LICENCE NO. **CYAL50167032 (C)** ORDNANCE SURVEY & GOVERNMENT OF IRELAND.

LEGEND

APPLICANTS LAND INTEREST

PLANNING APPLICATION AREA (c.24.7 ha)

Metres 1:50,000

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KILSARAN CONCRETE
EIAR NON TECHNICAL SUMMARY

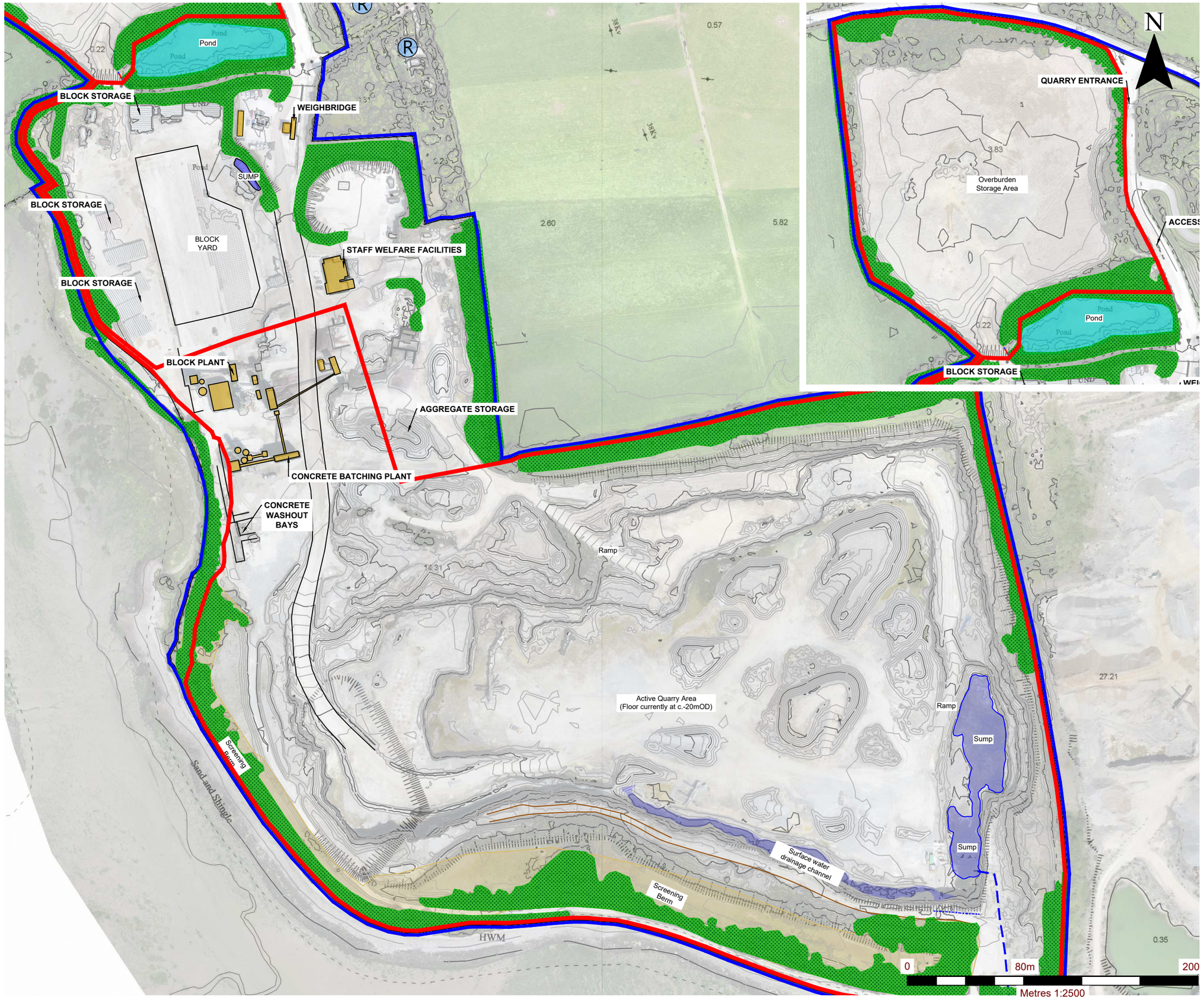
ROSSMORE QUARRY, CARRIGTWOHILL, CO. CORK

SITE LOCATION MAP

FIGURE NTS1

Scale	Date
1:50,000 @ A3	JUNE 2021

00036.00070.00001.FIG_NTS1.Site Location Map.dwg



NOTES

1. EXTRACT FROM 2500 DIGITAL ORDNANCE SURVEY MAPPING NO. 6386-A,B,C & D.

2. ORDNANCE SURVEY IRELAND LICENCE NO. SU **CYAL50167032** (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND.

LEGEND

- LAND INTEREST BOUNDARY
- APPLICATION APPLICATION AREA (c.24.7 ha)
- RESIDENTIAL PROPERTY LOCATION
- EXISTING SCREENING BERM

*'Orthomosaic produced from Aerial Photography flown **MAY 2018** by SLR Consulting Ireland (IAA Permit No. 150052) www.slrconsulting.com Tel. +353-1-2964667.*
Orthomosaic produced using Ground Control Points; Related to Irish Transverse Mercator Coordinate System and OS Malin Head Level Datum.

The accuracy of the orthomosaics and the digital elevation models (DEM) strongly depends on the flight height, lighting conditions, availability of textures, image quality, overlap, and type of terrain. Contours / 3D data relates to the surface model and not terrain levels. Typical accuracies: E: 0.05 m; N:0.05 m; Levels: 0.30 m.
All Dimensions and Levels are to be checked on site.

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KILSARAN CONCRETE
EIAR NON TECHNICAL SUMMARY

ROSSMORE QUARRY,
CARRIGTOHILL, CO. CORK

EXISTING SITE LAYOUT MAP

FIGURE NTS2

Scale	Date
1:2,500 @ A3	JUNE 2021

00036.00070.00001.FIG_NTS2.Existing Site Layout.dwg

NOTES

1. EXTRACT FROM 2500 DIGITAL ORDNANCE SURVEY MAPPING NO. 6386-A,B,C & D.

2. ORDNANCE SURVEY IRELAND LICENCE NO. SU **CYAL50167032** (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND.

LEGEND

- LAND INTEREST BOUNDARY
- APPLICATION APPLICATION AREA (c.24.7 ha)
- RESIDENTIAL PROPERTY LOCATION
- EXISTING SCREENING BERM

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KILSARAN CONCRETE
EIAR NON TECHNICAL SUMMARY

ROSSMORE QUARRY, CARRIGTOHILL, CO. CORK

PROPOSED SITE LAYOUT MAP

FIGURE NTS3

Scale	Date
1:2,500 @ A3	JUNE 2021

00036.00070.00001.FIG_NTS3.Proposed Site Layout.dwg

NOTES

1. EXTRACT FROM 2500 DIGITAL ORDNANCE SURVEY MAPPING NO. 6386-A,B,C & D.

2. ORDNANCE SURVEY IRELAND LICENCE NO. SU **CYAL50167032** (C) ORDNANCE SURVEY & GOVERNMENT OF IRELAND.

LEGEND

- APPLICANTS LAND INTEREST
- APPLICATION APPLICATION AREA (c.24.7 ha)

EXISTING ELEMENTS TO BE RETAINED

- DENSE VEGETATION ALONG THE SITE BOUNDARIES AND WITHIN THE SITE
- PROCESSING AND MANUFACTURING AREA

PROPOSED RESTORATION ELEMENTS

- WOODLAND MIX A
- WOODLAND MIX B
- BARRIER MIX
- HEDGE MIX
- AREA TO BE LEFT FOR NATURAL REGENERATION
- ROAD FRONTAGE RESTORATION AREA
- QUARRY VOID TO NATURALLY FILL WITH WATER
- PROPOSED FENCE TO SECURE THE QUARRY VOID

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Orthomosaic produced using Ground Control Points; Related to Irish Transverse Mercator Coordinate System and OS Malin Head Level Datum.

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KILSARAN CONCRETE

EIAR NON TECHNICAL SUMMARY

ROSSMORE QUARRY, CARRIGTOHILL, CO. CORK

PROPOSED RESTORATION PLAN

FIGURE NTS4

Scale	Date
1:2,500 @ A3	JUNE 2021

00036.00070.00001.FIG_NTS4.Proposed Restoration Plan.dwg

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