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CONTENTS

INTRODUCTION 3-1

NEED FOR THE DEVELOPMENT 3-2

Project Ireland 2040 3-2

Essential Aggregates: Providing for Ireland’s needs to 2040 3-3

Kildare County Development Plan 2023-2029 3-3

Construction Aggregates 3-3

DO NOTHING ALTERNATIVE 3-4

ALTERNATIVE SOURCES 3-5

ALTERNATIVE LOCATIONS 3-5

ALTERNATIVE DESIGNS / LAYOUTS 3-6

Residential Consideration 3-7

Ecological Consideration 3-7

Landscape & Visual Consideration 3-8

ALTERNATIVE PROCESSES 3-8



INTRODUCTION

- 3.1 The proposed development being examined in this Environmental Impact Assessment Report (EIAR) provides for development of the existing hard rock quarry and all existing processing, manufacturing and welfare facilities associated with this and the existing sand and gravel pit at the site. The application also provides for the importation of sand to the site.
- 3.2 The extracted rock on site will be used to produce a range of aggregates for at the existing on-site concrete batching facility or transported off-site directly as aggregates. The imported fine aggregate (sand) will be used solely in the concrete manufacturing process.
- 3.3 Following completion of extraction, processing and manufacturing operations, it is proposed that final restoration works will return the application site to a combination of long-term beneficial agricultural and ecological after-uses.
- 3.4 The proposed development consists of the following:
- Quarry development and associated processing previously permitted under P. Reg. Ref. No. 99/2042 and ABP Ref. PL09.123207) to include drilling, blasting, crushing and screening of rock; and lateral extension to same, with an overall extraction area of c. 6.2 hectares with no vertical deepening below the existing quarry floor. The appropriate period of planning register reference 99/2042 was extended by order dated 03/02/2017 by P. Reg. Ref. No. 16/1246;
 - Importation of up to 35,000 tonnes per annum of processed fine aggregate, principally sand for use in readymix concrete production on site;
 - Use of buildings and structures associated with the sand and gravel pit previously granted planning permission under P. Reg. Ref. No. 03/2754 comprising of the crushing, washing and screening plant with associated silt disposal lagoons; readymix concrete batching plant including powerhouse; prefabricated office; weighbridge; workshop building with concrete laboratory and bunded fuel tanks; aggregate storage bays; and one liquid effluent treatment system unit;
 - Closure of the existing site entrance with provision of a new site entrance located to the north of the existing entrance; realignment of the main internal site access road from the new site entrance to the central processing area with provision of a new wheelwash system; acoustic fence screening (c.2m in height x 170m in length); and a new screening berm along the western site boundary;
 - Restoration of the site lands will be to a combination of beneficial agricultural and ecological after-uses;
 - All associated site works within an overall application area of c. 51.7 hectares. The proposed operational period is for 10 years plus 2 years to complete restoration (total duration sought 12 years); and
 - Provision is also made for 3 no. sections of road improvements (widening) along the haul route between the site entrance and the R148 regional road. The proposals at the identified locations include for works in the public road and verge that aim to achieve a consistent carriageway width of 6.0m along with provision of verge widening on the inside of the three bends to improve forward visibility and intervisibility for all opposed traffic including traffic generated by the proposed development.

- 3.5 In the consideration of alternatives below, the need for the development, the do-nothing alternative and the issues of alternative sources of aggregates and alternative site locations have been addressed.

NEED FOR THE DEVELOPMENT

Project Ireland 2040

- 3.6 Project Ireland 2040 was published in February 2018 and is the overarching policy and planning framework for the social, economic and cultural development of the country for the next 20 years and further. It includes the National Development Plan: a ten-year strategy for public capital investment to 2027 and the 20-year National Planning Framework.
- 3.7 The National Planning Framework 2018 is the high-level strategic plan for influencing future growth and development up to the year 2040. The framework is intended to guide public and private investment, to protect and enhance the environment and create and promote opportunities.
- 3.8 The National Planning Framework states that:
- “Extractive industries are important for the supply of aggregates and construction materials and minerals to a variety of sectors, for both domestic requirements and for export. The planning process will play a key role in realising the potential of the extractive industries sector by identifying and protecting important reserves of aggregates and minerals from development that might prejudice their utilisation. Aggregates and minerals extraction will continue to be enabled where this is compatible with the protection of the environment in terms of air and water quality, natural and cultural heritage, the quality of life of residents in the vicinity, and provides for appropriate site rehabilitation”.*
- 3.9 The extractive industries are considered not just important as a source of supply to a variety of sectors both domestic and for export, aggregates are an essential requirement for Ireland's future. Project 2040 will not happen without a secure supply of aggregates.
- 3.10 The recovery in output in the Irish construction industry since 2013 has led to increased demand for construction aggregates and it is anticipated that demand will increase further in coming years following the pressure to increase residential housing output and the planned spend of almost €116 billion between the State and State-owned commercial companies under the National Development Plan and Project Ireland 2040 in the ten years from 2018 to 2027.
- 3.11 It is estimated that each new residential house typically requires 300-400 tonnes of aggregate. Every new school typically requires some 3,000 tonnes of aggregates and every 1km of roadway requires up to 30,000 tonnes of aggregates. On average each person within the EU consumes 6 tonnes of aggregate per year, however the current demand for aggregates in Ireland is twice that figure, at 12 tonnes per capita per year.
- 3.12 Based upon an average consumption rate of c. 350 tonnes of aggregates for every new house, the proposed development at Clonard will handle enough building materials equivalent to the construction of approximately 8,150 houses (or c. 815 houses for every year over the life of the development).
- 3.13 While it is acknowledged that the recent Covid-19 pandemic is likely to have had some impact on the construction sector, it is acknowledged that this was a temporary impact only and that the targets of the National Development Plan and Project Ireland 2040 will ultimately still be achieved.

Essential Aggregates: Providing for Ireland's needs to 2040

- 3.14 It is estimated that Ireland will need to produce an estimated 1.5 billion tonnes of aggregates to meet housing and infrastructure targets set down under the Government's Project Ireland 2040 plan, according to the Irish Concrete Federation (ICF) in a major new publication issued by them in October 2019.
- 3.15 *"Essential Aggregates: Providing for Ireland's needs to 2040"* is an industry led call for Government to ensure that Ireland's future supply of aggregates (crushed rock, sand and gravel) is planned, monitored and managed in a sustainable manner, to provide for Ireland's future infrastructure development.
- 3.16 The report identifies that demand for aggregates in Ireland at 12 tonnes per capita is twice the current EU 28 average, due to Ireland's infrastructural deficit, dispersed pattern of settlement and resulting large road network. The Federation warns that scarcities of some aggregates are now emerging in the Eastern and Midland regions, due to natural shortages, a lack of forward planning and delays and other shortcomings in the planning process. The report also highlights that:
- "Ireland has abundant natural reserves of high-quality aggregates, but their future accessibility must be planned for and protected by Government. A lack of future planning and priority in the planning process and delays in achieving prospective quarry planning permissions will result in future shortages in the supply of some types of construction aggregates in certain areas of the country. The future supply of aggregates needs to be prioritised and addressed in a planned manner if we are to reach the ambitious construction targets as laid out in Project Ireland 2040".*

Kildare County Development Plan 2023-2029

- 3.17 Section 9.9 of the Kildare County Development Plan (KCDP) 2023-2029 *'Mineral Resources & Extractive Industry'* recognises the importance of aggregate resources to the general economy and as a valuable resource of employment. However, the aim stated (**Policy RD P8**) for the extractive industry highlights the potential for conflict in the operation of these industries with wider environmental issues:
- 'Support and manage the appropriate future development of Kildare's natural aggregate resources in appropriate locations to ensure adequate supplies are available to meet the future needs of the county and the region in line with the principles of sustainable development and environmental management and to require operators to appropriately manage extraction sites when extraction has ceased.'*

Construction Aggregates

- 3.18 Natural sand and gravel and rock (called aggregate in the extraction industry) is a very important, valuable and highly prized resource in the construction materials sector. The aggregate has a use in almost all residential, commercial, retail and industrial building, including the manufacture of ready-mixed concrete, mortar, blocks, pipes, pre-cast floors, slabs, walls and tanks, construction of road foundations, production of road surfacing materials (asphalt), use as rail bedding, backfill to structures and trench support for water supply / wastewater pipes, use for surface water and land drainage etc.
- 3.19 The supply of high-quality aggregates and in particular sand and gravel has presented problems for the Irish construction sector in the past and continues to do, principally as a consequence of:

- the relative scarcity of such resources nationally and particularly sand and gravel within the Leinster region;
 - their distance from key markets;
 - their occurrence in environmental sensitive areas;
 - deficiencies in connecting road transport infrastructure.
- 3.20 The construction end-use ultimately determines specific requirements for the grade and quality of the aggregates to be used in construction. The previously won sand and gravel and rock deposits from the site, being of relatively high quality have proven suitable for multiple uses including concrete, mortar and asphalt production. The continued and ever-increasing regulation of the construction industry and construction materials sector is also driving the requirement and demand for high-grade construction materials.
- 3.21 The current planning application is principally for aggregate extraction and importation, processing and concrete production and the existing established site is in an area favourable to extraction activities, due to, *inter alia*:
- history of aggregate extraction at this site and in the immediate and general geographic location with an established history of extraction at this location for more than 20 years;
 - application site is a source of proven high-quality limestone at a previously established site;
 - ongoing and continued increases in the level of construction and development activity in the surrounding region is generating ever increasing demand for construction materials;
 - the favourable location of the application site, with the existing processing plant and ancillary infrastructure already in place at the site;
 - within an appropriate topographic setting i.e., for the most part, well screened from surrounding public areas;
 - located with access to the regional and national roads network;
 - best practice industry standard extraction methods can be used;
 - low development costs because existing infrastructure and facilities already in place;
 - proposed development to be carried out by a long established and experienced operator in the extractive and ancillary concrete / asphalt manufacturing industry with a proven track record in planning and environmental compliance within their hard rock quarry and sand & gravel pit portfolio.

DO NOTHING ALTERNATIVE

- 3.22 In a 'do-nothing scenario', the development at the existing sand and gravel pit and ancillary manufacturing facilities, currently permitted would continue to operate within the extant planning permission until January 2024 and thereafter be restored in a similar fashion to what is proposed in this planning application, i.e., a mix of agricultural use and beneficial habitat area. The hard rock quarry would remain inactive with rock previously permitted for extraction under P. Ref. 99/2042 remaining in-situ and the quarry void being restored in line with what was proposed previously.
- 3.23 Following closure there would be a loss of both the valuable proven aggregate reserves effectively sterilising these valuable aggregates. There would be a loss of the valuable concrete supply to the

region, and a loss of all employment currently associated with the site, with current staff numbers at c. 32.

ALTERNATIVE SOURCES

- 3.24 For the foreseeable future there are no real alternatives to primary land-won aggregates. At present, the use of secondary (recycled) aggregates in Ireland is still at an early stage in development. The volume of C&D waste suitable for recycling into secondary aggregates is low in comparison to the overall demand for aggregates. The demographic spread of the population results in only the large urban centres generating sufficient volumes of construction and demolition (C&D) waste to justify a commercial operation producing secondary aggregates.
- 3.25 In the longer term, there may be some scope for extraction of sand and gravel from marine sources.
- 3.26 In the absence of a significant increase in the sources of recycled / secondary and marine sources, land-based deposits (such as the proven reserves at Clonard) will continue to be the main source of construction aggregates in the surrounding region.

ALTERNATIVE LOCATIONS

- 3.27 This development is not like a factory or other commercial enterprise that can be located at many potential locations. It is a resource-based development and therefore the aggregates can only be worked (extracted) where they are present in-situ, as acknowledged in Section 9.9 of the Kildare CDP 2023-2029.
- 3.28 It is further recognised within paragraph 4.13 of the *Guidelines for Planning Authorities and An Bord Pleanála on carrying out Environmental Impact Assessment* prepared by the Department of Housing, Planning and Local Government in August 2018:
- “For example, some projects may be site specific so the consideration of alternative sites may not be relevant.”¹***
- 3.29 Aggregates can only be worked where they exist and where the environmental effects of working them can be minimised. However, this is not the only prerequisite which determines a suitable location for an aggregates site. Others include a willing seller, distance from market, required quality and quantity to justify capital investments, etc. It is usually the case that a number of these prerequisites are not met, and the alternative is discounted.
- 3.30 The alternatives available to the applicant relate to:
- further development at the existing and long established site where rock previously permitted for extraction under P. Ref. 99/2042 has not been completed;
 - development of a new replacement ‘greenfield’ development in the wider geographic area to serve the established clients and markets in this region.
- 3.31 The provision of aggregates is essential to meet the needs of society. As reserves of sand and gravel and rock are finite resources and eventually become exhausted at their location, it is therefore necessary for quarry operators to continually seek out new greenfield sites in tandem with maximising extraction at existing established sites. Both options are essential and required to replace

¹ Guidelines for Planning Authorities and An Bord Pleanála on carrying out EIA, August 2018

- existing supplies that are being worked out and to provide a security of supply of aggregates and building materials to the construction sector.
- 3.32 Kilsaran actively look for replacement aggregate sources and development sites within the Kildare and mid-East area on an ongoing basis. Potential sites have been investigated to varying degrees. The vast majority were discounted for the following reasons:
- their potential environmental effects;
 - high clay content or other deleterious materials within the deposit;
 - poor access down unsuitable county roads;
 - too far from the intended market (excessive haulage); or
 - proximity to built-up areas.
- 3.33 Kilsaran previously sought to develop a greenfield sand and gravel pit close to the application site in the townland of Brackagh (P. Ref. **20/1409**). A notification decision to grant permission was issued by Kildare County Council in September 2021. This decision was appealed to An Bord Pleanála and a final order to GRANT permission was made on 22/08/2023 (**ABP-31167-21**).
- 3.34 The existing site at Clonard is long established and has a local road network providing access to and from it that has proven to be suitable for this type of development over several decades.
- 3.35 Notwithstanding the continual search for suitable development sites, the lands at Clonard are proven to contain economic and high-quality reserves of rock. The site is deemed appropriate for the following reasons:
- suitability of the good quality rock reserves within the proposed extraction area;
 - access to the national road network and key transport corridors, namely the M4/M6 motorways;
 - low environmental impact: topography assists with screening of the development (no significant visual intrusion), and not within a designated ecological, archaeological or landscape area, etc.
 - co-located with existing and approved value-added concrete manufacturing facility on-site.
- 3.36 The further development of the existing quarry at Clonard will provide for extraction from a proven aggregate resource within an established operation. Sand and gravel currently extracted at the site and nearing completion will be substituted with importation to the site of a fine aggregate, principally sand from external permitted sites. The overall combined annual volumes of aggregates to be handled on site, at 285,000 tonnes, will be lower than that currently/previously permitted, with the Traffic and Transport assessment in EIAR Chapter 14 predicting the rate of HGV traffic generation will be approximately reduced by c. 20% from that recorded at the site in 2019.
- 3.37 Based on the above, it is considered that further development of the existing site and extension to same, subject to implementation of best environmental management practice and compliance with appropriate planning controls (i.e., planning conditions and standard emission limit values for the sector) is preferable in an overall planning context.

ALTERNATIVE DESIGNS / LAYOUTS

- 3.38 Alternative designs, including alternative layouts within the site were considered in previous planning applications for the site, with particular attention being paid to the location of the processing plant

and ancillary facilities in general being located centrally within the site and away from the public road and nearest residences where possible, along with the direction of working within the quarry.

- 3.39 The quarry site is located within a locally high hill when compared with the generally lower lying surrounding topography. The quarry was previously worked in a southerly direction into the existing hill, using the hill itself to screen the working area thereby minimising the visual impact of the development on the closest resident properties located mainly to the east, south and west of the quarry.
- 3.40 The design layout that was chosen previously was considered to best minimise the potential impacts on the environment from noise, dust and visual impacts having the benefit of:
- retaining existing hedgerows for as long as possible and only removing when necessary;
 - retaining existing grassland vegetation for as long as possible thereby minimising the stripped areas being exposed at any one time;
 - restoring worked out areas of the existing sand and gravel working area as soon as possible;
 - replanting of new hedgerows at the earliest opportunity.

Residential Consideration

- 3.41 The proposed extraction scheme for the quarry proposes to extract rock within the previously permitted 99/2402 extraction area with only a slight extension to the north away from the nearest residences to the south, refer to EIAR **Figure 2-2**. The distance from the nearest residences (R13 at 210m distance and R14 at 160m) will be the same distance from the extraction limit previously permitted by planning permission 99/2402.
- 3.42 Extraction within the quarry area will be worked from within the existing void. This will ensure that the machinery, for the most part, is operational behind the quarry face to afford maximum screening.
- 3.43 Closure of the existing entrance and relocation of the existing internal access road to the north east will have the benefit of moving existing HGV traffic away from the closest residence to the west of the site. This residence is referenced as (R3) in **Figure 2-2** and in other chapter figures of the EIAR. The current road configuration sees HGV traffic come within 30m of this residence.
- 3.44 The revised road configuration will increase the distance between the house (R3) and the access road to more than 300m. A new screening berm (c. 100m in length) will be placed along the western boundary in the location of the existing internal access road and wheelwash. The berm and the additional proposal to include an acoustic fence along the northern limit of the proposed new internal access road from the new site entrance back into the site for a distance of c. 170m will further provide screening of the site activities with the nearest local residences to the west.
- 3.45 Further to this, no extraction operations are planned for Sundays or Public Holidays.

Ecological Consideration

- 3.46 Most of the application site has already been disturbed due to prior extraction, processing and storage related activities.
- 3.47 Restoration of redundant areas will be carried out on a phased basis where possible. A section (c.5.2 hectares) of the existing pit area (refer to EIAR **Figure 2-1**) was restored to agricultural grassland in 2020, and further restoration and new planting works are proposed with this application as outlined

in **Table 2-2** of EIAR Chapter 2. These measures will off-set and exceed the proposed vegetation removal measures proposed as part of the application and detailed in **Table 2-1** of EIAR Chapter 2.

Landscape & Visual Consideration

- 3.48 The existing quarry void is located within a locally high hill when compared with the generally lower lying surrounding topography. The quarry is worked in a southerly direction into the existing hill, using the hill itself to screen the working area thereby minimising the visual impact of the development on the closest residential properties located mainly to the east, south and west of the quarry. The further development of the quarry extraction area will see it increase the footprint slightly (by c. 0.7 hectares) from its previously permitted profile under P. Ref. 99/2042 to a final footprint of c. 6.2 hectares. This further development will continue to utilise the hill itself to maximise screening and provide visual, noise and dust attenuation of the working area.
- 3.49 The position of the existing batching plant and the ancillary site facilities (e.g., workshop, office, etc.) at the centre of the site was considered during the previous planning application stage for P. Ref. 03/2754 as being the most suitable location, due to its proximity to both extraction areas and its low elevation, as effective visual and acoustic screening will be provided by the surrounding higher ground and distance from sensitive receptors.

ALTERNATIVE PROCESSES

- 3.50 Kilsaran is primarily a concrete and asphalt manufacturing company with expertise and experience in the field of quarrying, aggregates production, concrete manufacturing, road surfacing materials manufacturing (asphalt) and road making.
- 3.51 The consideration of alternative processes is confined to alternative manufacturing process for the products that will be produced at Clonard. In general, the alternatives are only subtly different.