

## Chapter 3: PROJECT DESCRIPTION

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### 3 DESCRIPTION OF THE PROPOSED DEVELOPMENT

#### 3.1 Introduction

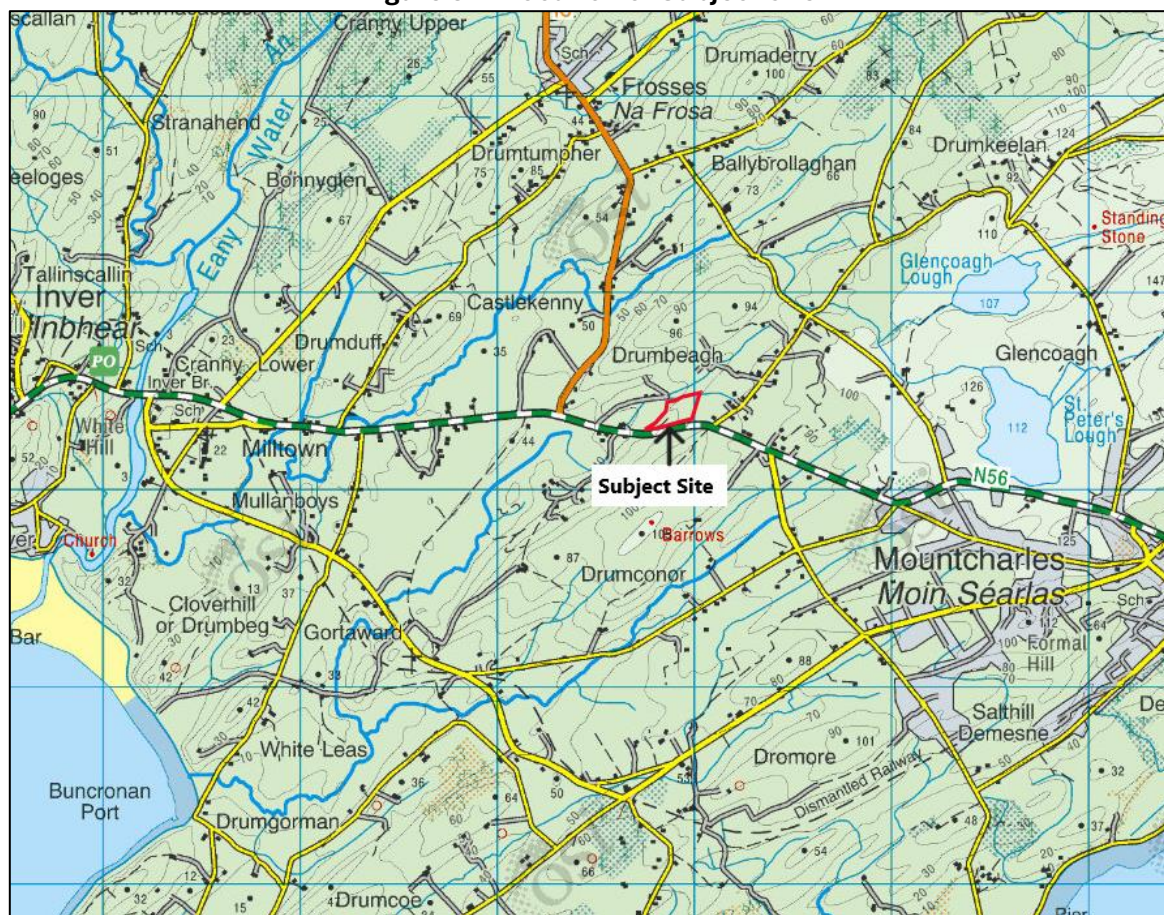
This Chapter of the rEiAR describes the operational processes that have been in place on the application site. This includes a description of the site and the activities involving extraction and processing for the site.

#### 3.2 Existing Site Description

##### 3.2.1 Site Location

The development consists of a quarry located on a 3.45-hectare site in the rural townland of Drumbeagh. The site is located immediately north of the N56 between the villages of Mountcharles and Inver. The site is approximately 2.5 km west of Mountcharles, 3 km east of Inver and 1.7 km south of the villages of Frosses. The site is accessed off a local slip road immediately off the N56. The access road also serves the quarry owner and one other local resident. The site is surrounded by a mixture of poor-quality agricultural land, improved agricultural grassland and one-off rural houses and farmsteads. There are also peatlands and isolated forestry blocks in the surrounding area. The subject site location is outlined in Figure 3.1 below.

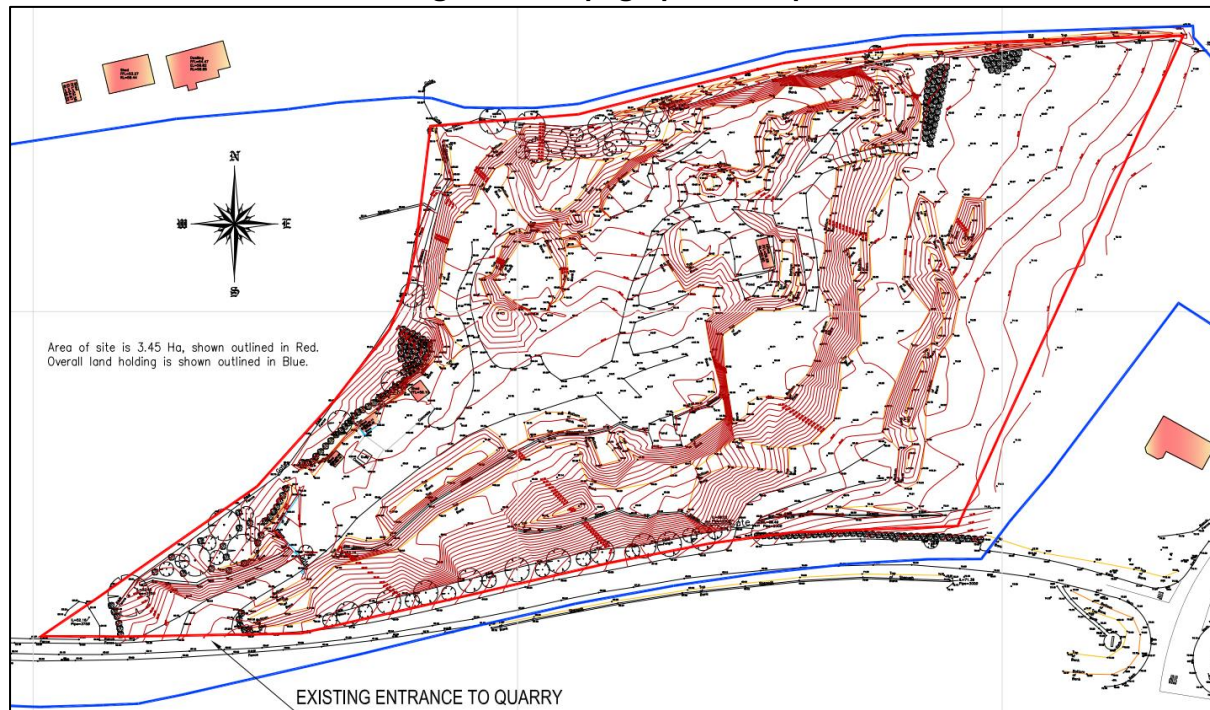
**Figure 3.1: Location of Subject site**



CYAL50381113 © Ordnance Survey Ireland/Government of Ireland

The topography of the study area is undulating and the topography within the quarry site varies from c.73 mOD on top of the screening berms in the east to c.54 mOD in the central deck of the site. Figure 3.2 shows the topographical map of the site.



**Figure 3.2: Topographical map**

(Supplied by Digital Land Surveyors – not to scale)

### **3.2.2 Extraction & Processing**

The existing working quarry consists of an extraction area where rock is extracted from quarry faces and a small processing area where stone is cut into size grades according to product demand.

### **3.2.3 Site Layout**

The quarry contains a central access road leading to the main quarry deck where stockpiles of product are stored on pallets and tonne bags awaiting collection. This central area is also used to park vehicles and to access the working quarry faces. There is a small processing area in the east of the site where stone is cut to size. Within this processing area there is a guillotine and a circular saw. Both these fixed pieces of plant are covered by temporary sheds. The circular saw area is serviced by a concrete surround graded towards a central sump which collects the runoff from this area. Effluent within the sump is periodically emptied into the main settlement tank via a portable pump. Sludge at the base of the sump is periodically cleaned out by an authorised waste collector and disposed at a licenced facility. The location of this site infrastructure is shown on the main site layout drawing in Figure 3.3 below.



Most of these processes are ongoing with the operation of the quarry apart from overburden removal and blasting. All overburden has been removed previously, and historical blasting has been shown to be detrimental to the product value.

### **3.3.1 Extraction**

Extraction of the product is by mechanical means using a ripping claw on an excavator. Occasionally boulders have to be broken down further using an impact breaker mounted on an excavator down into smaller more manageable pieces. In the distant past, the applicant states that occasionally blasting occurred on site to win rock. The practice was discontinued after it was seen to induce unwanted fracture patterns into the rock lessening its value as cut-stone product. There are no further plans to blast at the site. Material has been extracted in benches in line with the Safe Quarry Guidelines to the Safety, Health and Welfare at Work (Quarries) Regulations 2008 (S.I. No. 28 of 2008).

Originally, the overburden on site would have been stripped and utilised for the earthen berms which exist on the east boundary of the quarry site and along part of the northern boundary. These berms have subsequently vegetated.

### **3.3.2 Processing**

Won rock is then transported using excavator bucket or telehandler to the guillotine area. Rock is then guillotined by hand and stacked on pallets ready for collection. Some rock pieces are cut with a circular saw to size and then stacked on pallets ready for collection.

### **3.3.3 Product Collection/Delivery**

Murray Stone do not have any delivery vehicles. Most customers are long-standing and collection arrangement are in place whenever sufficient product is available. Product is either stacked on pallets, or in tonne bags and loaded onto customer lorries with the on-site telehandler. On average, there is one lorry pick-up (rigid or articulated) from site. There are also occasional smaller loads collected from the site by customers (on average one per week). These are usually done in smaller pick-up 3.5 T lorries or using vans and trailers.

### **3.3.4 Effluent Treatment**

There are several large depressions on the quarry deck which act as settlement facilities on site. The main settlement pond is located in the central southern part of the site. This pond receives runoff from most of the site. Following settlement, the outflow from this pond is through a heavily vegetated open channel discharging to a tributary of the Eany Water River at the site entrance.

A smaller settlement pond is located on the northern boundary of the site at the outer side of the screening berms and captures runoff from this immediate area. Following settlement this discharges to a separate tributary of the Eany Water River flowing past the northern boundary of the site. Water analysis of both site discharges and the receiving waters show the effluent leaving the quarry site to be of an acceptable standard.

Effluent from the cutting of product with the circular saw is capture on a concrete surface and directed into a sump. Effluent within the sump is periodically emptied into the main settlement tank via a portable pump. Sludge at the base of the sump is periodically cleaned out and used to supplement the screening berms.

### 3.4 Fuel and Chemical Storage

There are no hazardous chemicals in use at the quarry or proposed for any of the ancillary activities.

Re-fueling of generators on site is done by site operatives using a drip tray. An appropriate spill kit is available if required. Re-fueling of the plant on site is carried out using a mobile bowser. The mobile bowser is fully bunded and drip trays are used when re-fueling and spill kits are available if required. All re-fueling operations are carried out with strict adherence to pollution prevention protocols. Lubricants for machinery maintenance and fuel are stored in a bunded area within the applicant's workshop off site.

### 3.5 Surface and Groundwater Management

A number of measures are, and have been, in place for the protection of surface and groundwater on the site. Protection from accidental pollution is achieved by adhering to best practice in relation to mobile re-fueling of plant and vehicles and by robust fuel and lubricant storage measures off-site<sup>1</sup>. Further measures proposed include the installation of a hydrocarbon interceptor immediately prior to the discharge of site effluent to the tributary of the Eany River at the site entrance.

Protection of the wider surface water environment is achieved by the use of settlement ponds within the site to ensure discharge to natural waters has acceptable levels of suspended sediment. The waters draining the extraction areas are directed into the main settlement pond on site in the central southern area. Discharge is through a heavily vegetated channel to a tributary of the Eany River. Historically as the point of extraction progressed, similar temporary settlement ponds have been used to treat effluent.

Effluent generated from the northern portion of the current site percolates through the berms on the northern boundary and into a linear settlement pond on the northern side of the berms. This pond is partially vegetated and provided settlement treatment before effluent discharge off site to another tributary of the River Eany. Activities are dry on site. There is no washing of product. Further details on water management are contained within Chapter 8, *Water*, of this EIAR.

### 3.6 Working Hours and Employment

Normal quarrying operations are confined to the hours of 8.00 am to 5.00 pm, Monday to Friday. The quarry is shut on Saturdays, Sundays and Public Holidays. The applicant provides employment for approximately 2-3 people directly.

### 3.7 Utilities and Services

There is no electricity supply or mains water supply to the site. The guillotine and circular saw are electric and are powered by a diesel generator on site. There is no telecommunications connection to the site.

### 3.8 Facilities

There is no weighbridge on site. Office paperwork for the recording of loads/enquiries etc is kept in notebooks in a waterproof folder in the guillotine shed. These records are transferred to the applicant's home office at the end of each day. Mobile phones are in use on site for emergencies. Canteen, toilet and welfare facilities are provided at the applicant home approximately 130 m west of the quarry entrance.

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<sup>1</sup> Guidelines on protection of fisheries during construction works in and adjacent to waters – Inland Fisheries Ireland 2016

### 3.9 Waste Management

There is no foul water waste on site. Toilet facilities are provided at the applicant's home 130 m west of the quarry entrance. Murray Stone has mechanisms in place to ensure that all waste generated at the site is properly recovered, recycled and/or disposed of in a responsible manner. Murray Stone will comply with all existing environmental legislation and guidelines to continue to improve waste management at the site. The following types of waste will be, or have been, generated on the site:

- Overburden
- General Waste
- Waste Metals
- Waste oils
- Batteries
- Waste Timber

#### 3.9.1 Overburden

Overburden is the soil and sub soil stripped from ground to gain access to the bedrock underneath. Overburden has been used for the creation of screening berms along the eastern quarry boundary and for use in landscaping and restoration activities. Spoil, or unwanted material from processing activities, will also be utilised for the construction of screening berms and landscaping/restoration activities. All extractive waste generated at the site will be dealt with in line with the Waste management (Management of Waste from the Extractive Industries) Regulations, SI No. 566 of 2009. Using extractive waste for the construction of screening berms is seen as an appropriate end use. Berms have been left to recolonize with native trees and shrubs to provide screening. The berm on the north boundary of the site has re-colonised with Himalayan Knotweed. The treatment of the Himalayan Knotweed is discussed in Chapter 6, *Biodiversity*, of this rEiAR.

#### 3.9.2 General Waste

There isn't any general waste generated on site as the welfare facilities and canteen are located off site. Should any general be found on site it will be placed in an appropriate bin and the waste taken is taken to a licenced facility for recovery, recycling or disposal by an authorised contractor.

#### 3.9.3 Waste Metals

Waste metal originating from parts replaced on plant and vehicles and end-of-life vehicles is stored at a designated point near the guillotine shed. Some of this material is recycled on site as replacement parts for plant. Waste metal which can't be re-used on site is collected by licenced contractors for recycling at licenced facilities.

#### 3.9.4 Waste Oils & Hydrocarbons

Waste oils have and will be generated from plant and equipment requiring service or maintenance. Where possible all plant and machinery will be repaired or serviced in the applicant's workshop off site. Waste oils, filters etc. will be stored in appropriately bunded containers off-site until they are collected by licenced contractors and disposed of or recycled off-site at an authorised facility.

#### 3.9.5 Batteries

Waste batteries replaced in plant and machinery are stored off site and are returned periodically to the supplier for recovery/re-use.



### 3.10 Transport and Access

The quarry is accessed directly off the R251, Letterkenny to Churchill regional road. A series of hardcore constructed internal haul routes connect the extraction areas with the processing and manufacturing areas. The area around the entrance and main office is surfaced with a mixture of asphalt and concrete. The wheel-wash and damp-down spray system is located next to the weighbridge at the quarry entrance to ensure dust generation is minimised.

### 3.11 Safety, Security and Screening

The perimeter of the current site is bounded by a mixture of screening berms, stockproof fencing and hedges/trees. The southern boundary is predominantly treelined with a gate at the southeastern corner. The eastern boundary is demarked with screening berms. The northern boundary is a mixture of existing hedges, screening berms and secure fencing. The western boundary where the quarry entrance is located is secured with a stockproof fence and a locked gate.

Further details on screening mitigation measures that have been in place and are proposed p area are given in Chapter 15, *Landscape & Restoration*, of this rEIAR.

### 3.12 Dust Generation and Control

The extraction, processing and transport of aggregate has, and has had, potential to generate wind-blown dust if not managed effectively. In periods of prolonged dry weather mobile sprinklers are employed to dampen down haul roads, plant and stockpiles to minimize dust blow. Further details on dust generation and control are given in Chapter 10, *Air*, of this rEIAR.

### 3.13 Noise Generation and Control

Noise will be, and will have been, generated as a result of the activities being undertaken at the application site. All necessary precautions have been put in place to ensure that operations associated with the quarry do not impact significantly on the local environment. Noise generation and control is dealt with in Chapter 9, *Noise and Vibration*, of this rEIAR.

### 3.14 Landscaping, Restoration, Decommissioning and Aftercare

When substitute consent has been achieved, the applicant wishes to regularize activities into the future and will apply for permission for continuation of quarrying activity at the site. When the appropriate planning period has expired at the application site and no further planning permission has been obtained, the applicant will be required to implement a restoration and decommissioning plan. The excavation of rock will result in the creation of a quarry void. It is important to implement a restoration plan so that the site is safe and returned to some beneficial use. This will include rounding off the top of the face, re-grading the quarry face on each redundant bench and re-distributing the stockpiled soil/overburden on these slopes to allow natural re-colonisation of vegetation.

Details of the site restoration plan are laid out in Chapter 15, *Landscape & Restoration*, of this rEIAR. Planting activity in the redundant extraction areas will increase biodiversity and provide additional cover, foraging and nesting habitat for local wildlife. The planting of native species in this area will also retain water, bind soil, reduce erosion and increase fungal activity as well as supporting soil biodiversity. Planted vegetation will prevent invasive species from encroaching on the unoccupied soils and will provide valuable ecological services while allowing the natural seed bank in the soil to regenerate.

### 3.15 Technical Difficulties

No technical difficulties were encountered.