08 January 2021

An Bord Pleanala
64 Marlborough Street,
Dublin 1

Re: Substitute Consent Application for Ummera Gravel Pit
Ummera County Cork
For Drimoleague Concrete Works Limited
ABP Case Number: ABP-308036-20

Dear Sirs

On behalf of Drimoleague Concrete Works Ltd (DCWL), please find attached its response to Cork County Council's submission on the Substitute Consent application for Ummera Gravel Pit. This response addresses the further information sought by the Council and the Council's suggested planning conditions. We note the Council's submission on the separate but related Further Development application (ABP reference ABP-308194-20) and have provided a response under separate cover.

As noted in the Council's submission, '*the board principle of this quarry at this location is generally acceptable*'. We trust that the clarification provided below will enable the Board to grant Substitute Consent.

FURTHER INFORMATION REQUEST

1. Speed Limit Enforcement

The access road is approximately 230m long (from the public road to the yard). The speed limit for the site is stated in the Environmental Management System (EMS). DCWL drivers, and other regular 3rd party customers, have been advised of the speed limit and the rational for it. To enforce the limit, signage will be erected along the access road remaindering users of the speed limit. Drivers observed to be breaking the speed limit will be warned by the pit manager. Lastly, habitual offenders will be barred from using the site.

2. Sprinkler System

The sprinkler system was installed in the 1990s to address a dust complaint from the neighbours located to the east of the gravel pit (H1). During the preparation of the rEIAR, we spoke with the neighbours who have indicated that they are no longer affected by dust from the gravel pit and it is no longer a nuisance. The maturing of the trees planted along the western perimeter of the site and along the access road shelters the pit from the prevailing wind direction, which has greatly reduced the potential for dust generation. DCWL considers that the proposals detailed in the rEIAR are sufficient to manage dust, primarily the paving of the access road. The inclusion of the sprinkler system is not necessary and would unnecessarily use the water resource.

3. Dust Monitoring

The dust monitoring programme for the gravel pit was submitted to Cork County Council during the registration on the gravel pit in 2005. Three locations were submitted for agreement with the Council – these monitoring points (D1, D2 and D3) are shown on Figure 6-1 of the rEIAR and Drawing No. 008 for the Section 37L application - 1:1,250 scale Monitoring Point Location Plan (attached). It is proposed to monitor dust levels for two periods each year between May and September. The results will be compared to the emission limit value of 350mg/m^2/day (the limit set by the Council during the S261 registration. Daily rainfall data from the nearest gauging station can also be submitted. It is unclear how the Council wants the assimilative capacity of the receiving environment to be determined. It is not practical for a small-scale gravel pit, with one operator, to manage an on-site meteorological station. The dust monitoring results for the site, submitted in the rEIAR, are well within the emission limit value of 350mg/m^2/day, demonstrating that the measures taken have been and are effective.

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4. Height of Stockpiles

The stockpiles of aggregate are 8m high.

5. Outline Habitats & Species Management Plan

The biodiversity chapter '*identifies, quantifies and evaluates the effects of historical extraction activities and potential effects that may have occurred, are occurring or may occur in the future as a result of these activities on habitats species and ecosystems in the surrounding environment. It considers impacts to ecological receptors, mitigation measures being implemented and remedial mitigation to be implemented to offset or reduce the identified impacts*'. The Council is requesting a Habitats and Species Management Plan, which we consider could be dealt with by condition under the Section 37L Further Development application. An outline is provided below.

Habitats

The habitat map for the site is provided on the site plan – Drawing 009 – 1:1,250 Habitat Map (attached). The dashed purple line shows the extent of the extraction area. This consists mostly of Active Quarries and Mines (ED4), grassland and scrub.

The habitats mapped as being of local importance (higher value) or of County importance within the Section 37L application boundary are:

- Depositing River (FW2): The Clashavoon Stream is considered of County importance due to its potential to host otter. Apart from the weir, there will be no disturbance to this habitat. Works at the gravel pit do not interfere with the use of the stream by otter.
- Scrub (WS1): Most of the areas of scrub on site are classified as being of local ecological importance (lower value). An area of scrub at the southwest corner of the site is considered to be local ecological importance (higher value) as it provides an ecological corridor. Part of this scrub habitat is within the excavation boundary. The use of this area as an ecological corridor will be offset by the provision of a planted berm around the perimeter of this area. The existing screening berms on the eastern side of the site are identified as ecological corridors for wildlife using and passing through the site and the proposed berm will act in a similar manner.
- Willow Dominated Dry Woodland (WN): It is found on the western side of the site, in two areas between public road and site access road / settlement ponds. A third area is located between the public road and the Clashavoon Stream – i.e. the location of the original settlement pond. It is considered to be of local importance (higher value). These areas will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Wet Willow-Alder-Ash Woodland (WN6): This habitat is located at the northwest corner of the site between the settlement ponds and the public road. It is considered to be of local importance (higher value). This area will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Hedgerow (WL1): This consists of a length of hedgerow recorded along the southern Section 37L application boundary. It is considered to be of local importance (higher value). This hedgerow will not be interfered with during Further Development and will be retained as part of the site restoration plan.
- Treeline (WL2): This consists of two sections of treeline recorded within the Section 37L application boundary; one at the southern/southwestern boundary and one at the northeast corner of the site. It is considered to be of local importance (higher value). Of the 300m of Treeline within the Section 37L boundary, approximately 70m will be removed. The remaining Treeline will be enhanced with additional tree planting as shown on Drawing 004 (already submitted). There is a further 600m of Treeline within the landholding but outside the Section 37L application boundary that will not be interfered with.

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- Dry Meadows and Grassy Verges (GS2): These habitats are found along the eastern margin of the site and southern area of the landholding. It is of local importance (higher value). Most of this habitat along the eastern site boundary corresponds with the perimeter screening berm and is outside the extraction area. The area at the southern boundary is used for silage and forms part of the extraction area. The remaining area of Dry Meadows habitat is outside the Section 37L application boundary and will be retained. The long-term restoration plan for the site is to return most of the site back to Dry Meadow.
- Wet grassland (GS4): A small area of wet grassland was recorded within the dry meadow habitat, south of the active gravel pit, close to house H2. It serves as a foraging area for local invertebrates and birds and so is considered of local importance (higher value). This area has developed on revegetated low profile topsoil stockpiles due to berms impeding runoff water. It will be removed during the Further Development of the gravel pit.

The loss of habitat of local ecological value (noted above) will be replaced over time with a more diverse mix of semi-natural habitats that currently characterise the site (i.e. a positive impact on biodiversity).

Additional habitats mapped as being of local importance (higher value) are found within the landholding but outside the Section 37L boundary. These include Mixed Broadleaved Woodland (WD1), Hedgerow (WL2) and Treeline (WL2). These habitats were avoided in the design of the Further Development application and will add to the biodiversity mix within the landholding.

Mammals
The site is considered to be of local importance (lower value) for terrestrial mammals. Only rabbit and fox were confirmed to be using the site. Otter was not found to be using the site. While they may use the Clashavoon Stream to forage, no otter holts were recorded along the Clashavoon Stream between the sampling points. Otters have been recorded on the Laney River. The settlement ponds do not provide suitable habitat for otter. No badger setts were recorded during the site surveys.

Bats
Relatively low levels of overnight bat activity were recorded on the Songmeter placed at the settlement pond and very low levels of bat activity at the central location of the gravel pit. Ummera gravel pit is not an important foraging site for bats. The study found there are excellent foraging sites for bats along the route of the River Laney and the Clashavoon Stream very close to the western and northern boundary of the site. These will not be affected by the works.

Amphibians
Froglets were recorded in wet grassland habitat near the abandoned farmyard and wet grassland habitat near spoil heaps. The latter is within the further development area and can be stripped outside the season when young frogs would be present. Given the low numbers found within the site, this site is of local importance (lower value) for amphibians. The ponds within the gravel pit provide sub-optimal habitat for Smooth Newt. Given the high sediment content it is unlikely frogs will use this habitat to breed.

Birds
A wide range of birds were recorded on or passing over the site. The majority of birds noted are not of conservation concern (Green listed); while Goldcrest, Sand martin, Lesser-black backed gull, Sparrowhawk, Swallow and Robin are amber listed. The site is considered to be of local importance (higher value) for birds. Gravel / sand cliffs / banks supporting Sand martin nests are not interfered with during the breeding season.

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Invasive Species
No invasive plant species listed on the 2011 Regulations were recorded on site. Four invasive / non-native species were recorded at the site. These were Buddleia (single plant), Russian Comfrey (single plant), Montbretia (on bank adjacent to site access road), and Cherry Laurel (at ruined farmhouse). These plants are outside the extraction area. However, DCWL will arrange for their eradication. The quarry manager will be trained in the identification of these plants and how to control their spread.

Outline of Measures
Measures outlined in the Substitute Consent and/or Section 37L application documents to management habitats and species includes:

1. Partial removal of the weir on the Clashavoon Stream to permit the free passage of fish.
2. Maintaining the habitat that has developed at the original settlement pond between the road and the Clashavoon Stream.
3. Maintaining the mature trees that have developed around the perimeter of the site. These woodlands and hedgerow provide suitable foraging and corridors for a range of species found on site. The proposed landscaping of the site to incorporate additional planting of native species will provide suitable new habitat for birds displaced by the loss of scrub and treeline habitat (both habitats are widespread in the wider environment).
4. Enhancing the screen planting on the berms along the eastern site boundary. These provide corridors for mammals moving through the area and nest and foraging for birds.
5. Clearance of vegetation such as scrub will be carried out outside the breeding bird season from 01 March to 31 August inclusive.
6. As part of the site restoration a face of the gravel pit will be left in-situ for nesting Sand martins. Extraction does not take place on faces where Sand martins are actively nesting. As with the removal of vegetation, works to sand martin nesting burrows will be conducted outside the bird nesting season (March 1st – 31st August).

6. Restoration Plan
The submission of a Restoration Plan can be conditioned if the Substitute Consent is granted. A similar condition would be included in the Further Development (if granted). Once the Further Development commences, the conditions of the Substitute Consent would lapse and the conditions controlling quarrying under Section 37L becomes the only permission requiring ongoing compliance.

7. Environmental Management System
Six copies of DCWL's EMS for the Ummera Gravel Pit are attached.

8. Surface Water Abstraction Assessment
The washing of the gravel is operated within a closed system where wash water is pumped from the last pond and used water is directed into the first pond. Rainfall is used preferentially to top up the system and the Clashavoon Stream is used as a secondary source. The abstraction from the stream is not metered. Estimates are given in Section 7.1.3 of the S37L Further Development application as follows:

'*As discussed in Chapter 2, the settlement ponds have a capacity of approximately 14,970m3 following cleaning (removal of silt). This capacity decreases over time as the ponds fill with silt. In dry periods, water will be lost through wetting of aggregate, infiltration and evaporation. Over the course of a working day, approximately 800m3 of water is used. Assuming a 5% loss, 40m3 of top-up water would need to be abstracted from the Clashavoon Stream. This would equate to 2.7% of the dry weather flow over a 24-hour period.*

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It is noted that topping up would only be required when the level in the last pond was too low to pump. Assuming losses of 40m³/day, the capacity in that pond would allow for over approximately 100 days without top-up. In this time, rainfall would naturally top up the ponds and / or abstraction could be timed during high flows in the stream.'

The catchment area of the ponds (including the ponds) is approximately 3ha. Based on the mean annual rainfall for the Ummera area (1,200mm), the incident rainfall on the 3ha is approximately 36,000m³ per annum or 98.6m³/day on average. Assuming a runoff co-efficient for the site of 0.37, on average, 36.5m³/day would top up the ponds. However, the rainfall will not always coincide when top-up is needed, so small volumes of abstraction are required. With low volumes of occasional abstraction from the stream, the impact on hydrological processes, habitats and species would be localised (between the abstraction and point and River Laney confluence) imperceptible (an effect capable of measure but without consequences) brief (lasting less than a day) neutral impact. Furthermore, water seeping from the ponds will contribute to groundwater baseflow to the Clashavoon Stream. With use, the ponds will self-seal, reducing water losses and reducing abstraction requirements.

9. Weir on Clashavoon Stream

It is not stated in the rEIAR that the weir has been partially removed. It is stated in the EIAR (Section 10.5.3) for the S37L Further Development application that '*the partial removal of the weir will improve access upstream for salmon and lamprey species*'. This work has not been undertaken, so the requested assessment can't be provided. DCWL will liaise with Inland Fisheries Ireland (IFI) regards the weir.

10. Impacts of Water Abstraction

The EPA water quality monitoring on the River Laney upstream and downstream of its confluence with the Clashavoon Stream (i.e. upstream and downstream of the gravel pit) indicates no deterioration of water quality. Only on one occasion (1990) was a reduction in Q-value status recorded – a change from Q4 to Q5. Please refer to further information request item No. 13 for the correct Q-values for the Laney River. The pit would have been operational during the full period of the EPA monitoring. This long-term monitoring indicates that the gravel pit has not had an impact on surface water quality. During this period improvements have been made to the management of wash water as detailed in the rEIAR. Further improvements are proposed in the rEIAR / EIAR (for Further Development), such as the partial removal of the weir. Monitoring of surface quality is also proposed to provide ongoing assessment of the operations at the gravel pit.

11. Stability of Settlement Pond Banks

The ponds are installed into undisturbed in-situ gravel deposits. The ponds have been at their current location for the last 25 years without incident. The banks to the east of the ponds have been seeded with grass to reduce scouring during heavy rainfall. The ponds are excavated into the ground, so the perimeter banks are composed of in-situ gravels.

Using Barnes (1992) for effective stress analysis, the critical factor of safety (F) for long term effective stress is of the form:

$$F = a + b \tan \phi$$

Where:

a and b = stability coefficients related to slope angle, the cohesion of soil parameter $c'/\gamma H$ and the water table parameter h_w/H.
c' = cohesion (in effective stress terms) (a conservative value of 5kPa is used to represent poorly graded silty sands)
γ = unit weigh (22kN/m³)
H = height of slope (3m)
h_w = depth to water table (>3m – no groundwater was observed in excavations)
ϕ = friction angle (34°)

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Only conservative textbook values can be used as the ground investigation was not possible in the time allowed.

Using tables from Barnes (1992) for a 1:1 slope, a = 0.6; b = 1.39 and tan φ = 0.67

F = 1.5 – the banks are stable in the dry condition.

When the ponds are filled with water, a = 0.44; b = 1.32 and tan φ = 0.67.

F = 1.3 – the banks are stable when filled.

The natural cementation of the gravel deposit will increase the stability and factor of safety but is not considered.

The risk of a bank failure is therefore very low and as noted, no bank failures have occurred at the ponds since constructed – approximately 25 years ago. The Council raise the issue of the consequences of a pond bank failure being the discharge of silt laden water onto the public road and into the stream. In the unlikely event of a bank failure, it would displace the water in that pond. Taking a worse-case scenario of a bank on the largest pond failing and displacing half its contents (i.e. 2,625m^3; ½ x area (1,750m^2) x 3m) of water, the freeboard in the other ponds and safety berms around the pond enclosure would have the capacity to contain that water. Any water reaching the yard area would be intercepted by drains directing it to the overflow pond where additional capacity is available. The infrastructure in place is robust and no remedial measures are deemed necessary.

12. Stability of Silt Stores

Silt excavated from the ponds is stored in stockpiles of approximately 5 to 6m height and with side slope angles of 20° typically. The silt is stable at these angles. The silt is banked against in-situ gravel deposits. Any rainfall runoff from the silt stockpiles is intercepted and directed to the settlement ponds. The stockpiles vegetate naturally providing further stability.

13. Q-values on Laney River

The corrected Table 10-7 is provided below.

Table Error! No text of specified style in document.**-1: Q-Value recorded on the R. Laney River – 1973- 2019**

Year	Q-Value	Status	Q-Value	Status
	RS19L010400 R. Laney; upstream of Clashavoon confluence		RS19L010500 R. Laney; downstream of site	
1976	---	---	5	High
1981	5	High	5	High
1986	5	High	5	High
1990	5	High	4	Good
1994	4-5	High	4-5	High
1997	4-5	High	4-5	High
1999	4-5	High	4-5	High
2002	4-5	High	4-5	High
2005	4-5	High	4-5	High
2008	4-5	High	4-5	High
2011	4-5	High	4-5	High
2014	4-5	High	4-5	High
2017	5	High	5	High
2018	4-5	High	4-5	High
2019	4-5	High	4-5	High

The discussion of water quality based on the EPA Q-values in Section 10.4.4 is modified as follows:

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'EPA water quality data (Q-values) is presented from stations on the River Laney upstream and downstream of the confluence with the Clashavoon Stream. These data suggest that water quality downstream of the gravel pit broadly mirror those of the upstream station on the River Laney. On only one occasion (1990) was there a lower q-value recorded in the downstream station. While negative impacts on the Clashavoon Stream have been noted, in for example correspondence, from the SWRFB, the EPA data doesn't indicate an impact on water quality from the gravel pit'.

14. Discharges to Clashavoon Stream

The surface water features at the gravel pit are shown on Figure 7-2 of the rEIAR and EIAR. The discharge referred to on page 131 of the EIAR (for the Further Development application) is the end of the original settlement pond located on the western side of the public road. As noted, this pond is no longer used by the gravel pit; the pipe is closed off. The recirculated water was previously returned to the washing plant from this point. This is no longer the arrangement. The only water now entering this pond is runoff from the public road – the Council has directed runoff from the road into this pond.

15. Discharge from Settlement Ponds

There is no direct discharge from the settlement ponds to the Clashavoon Stream. Overflow from the settlement pond is directed to a pond adjacent to the access road. No discharges from this pond have been observed during site visits or reported by the quarry manager. The pond is dry, or water level is below the invert of the discharge pipe.

16. Surface Water Discharges

Surface water features at the gravel pit are shown on Figure 7-2. They have been added to Drawing No. 008 for the Section 37L application - 1:1,250 scale Monitoring Point Location Plan. Note that the locations where they cross local road L-3423-20 are Council-maintained culverts. These streams and drains discharge clean water to the Laney River.

17. IFI & Removal of Weir

Noted.

SUGGESTED PLANNING CONDITIONS

The Council have suggested 25 No. planning conditions should the Board grant Substitute Consent. Most of these relate to the further development of the gravel pit. DCWL suggests that conditions attached to the Substitute Consent reflect past development only. These might include submission of a restoration plan, and improvements to the weir on the Clashavoon Stream and restoration bond. These conditions should be contingent on the further development of the gravel pit not proceeding within a fixed period (say 6 or 9 months from grant of further development). Once that further development commences, the conditions controlling the Substitute Consent would lapse and the conditions controlling quarrying under Section 37L becomes the only permission requiring ongoing compliance.

If you have any queries, please contact the undersigned.

Yours sincerely,

Dan Keohane

Encl.

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ATTACHMENTS

6 No. copies of Drawing No. 008 - 1:1,250 scale Monitoring Point Location Plan
6 No. copies of Drawing 009 – 1:1,250 Habitat Map
6 No. copies of Ummera Gravel Pit EMS

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ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Mumane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
16. Local Government (Planning and Development) Act 1993.
17. The Heritage Act, 1995.
18. Waste Management Act 1996 & Amendments.
19. Wildlife (Amendment) Act, 2000.
20. Planning & Development Act 2000.
21. Safety, Health and Welfare at Work Act 2005 (Quarries).
22. Planning & Development (Amendment) Act, 2010.

Table of Statutory Instruments

1. Local Government (Planning and Development) Regulations 1964.
2. Local Government (Planning and Development) Regulations 1977 (SI. No.65).
3. The EC (Waste) Regulations 1979.
4. The EC (Toxic and Dangerous Waste) Regulations 1982.
5. Air Pollution 1987 (Air Quality Standards) Regulations 1987 (SI No.244).
6. Local Government (Water Pollution) Regulations 1987 (SI No.108)
7. Air Pollution 1987 (Licensing of Industrial Plant) Regulations 1988 (SI No.266) .
8. European Communities (Environmental Impact Assessment) Regulations 1989 (SI No.349).
9. The EC (Environmental Impact Assessment) Regulations 1990.
10. The EC (Asbestos Waste) Regulations 1990.
11. Local Government (Planning and Development) Regulations 1990 (SI. No.25).
12. The EC (Waste oil) Regulations 1992.
13. Local Government (Water Pollution) Regulations 1992 (SI No.271).
14. Access to information on the Environment Regulations 1996.
15. The EC (Waste) Regulations 1994.
16. Environmental Protection Agency Act 1992 (Commencement) Order 1994 (SI No.82).
17. Environmental Protection Agency (Licensing) Regulations 1994.
18. European Communities (Environmental Impact Assessment) (Amendment) Regulations 1994 (SI No.84).
19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
20. Local Government (Planning and Development) Regulations 2001 (SI No. 600).
21. Planning & Development (Amendment (No. 2) Regulations 2015 (SI No. 310).
22. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296).
23. Health and Welfare at Work (Quarries) Regulations 2008 (SI No. 28).
24. Safety, Health and Welfare at Work Act 2005 (Quarries) (Repeals and Revocations) (Commencement) Order 2008 (SI No. 29)
25. Safety, Health and Welfare at Work (Quarries)(Amendment) Regulations 2013 (SI No. 9)

List of Technical Reference Documents

1. Sand and Gravel Association (SAGA) Code of Practice, August 1991.
2. BACMI The British Aggregate Construction Materials Industries, Environmental Code, March 1992.
3. The Extractive Industry and the Environment in Ireland, Britain and the rest of the EC. Irish Mining and Quarrying Society Conference 1993.
4. Environmental Practices and Audit Checklist for the Ready Mixed Concrete Industry. ERMCO 1996.
5. Secretary of State's Guidance - Blending, packing, loading and use of bulk cement. Department of the Environment, London, February 1991.
6. Secretary of State's Guidance - Quarry Processes - PG3/9 (96) Department of the Environment, London.
7. Secretary of State's Guidance - Mineral Drying and Roadstone - Coating Processes, PG3/15 (96) Department of the Environment, London.
8. Secretary of State's Guidance - Mobile Crushing and Screening - Processes, PG3/16 (96) Department of the Environment, London.
9. Minerals Planning Guidance: The control of noise at surface mineral workings (MPG 11), Department of Environment, London, April 1993.
10. Quarries and Ancillary Activities, Guidelines for Planning Authorities, Dept. of the Environment, Heritage & Local Government, April 2004
11. Environmental Management in the Extractive Industry, EPA, 2005.
12. Environmental Management Guidelines – Environmental Management in the Extractive Industry (non- Schedule Minerals), EPA 2006.
13. Geological Heritage Guidelines for the Extractive Industry, Geological Survey of Ireland 2008.
14. Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry, Notice Nature 2009.
15. Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation, 2009.
16. Code of Practice: Wastewater Treatment Systems for Single Houses, EPA, 2010.
17. Environmental Protection Agency (EPA). Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities, 2012.

SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:
Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:
- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):
- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4.4 Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products*, September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:

- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):

- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act, 1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products,* November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code",* ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case If hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

''Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

DRIMOLEAGUE CONCRETE WORKS LTD.

Suppliers of: Readymix Concrete • Blocks & Precast
Sand & Gravel • Hardcore & Crushed Rock

ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Murnane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
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18. Waste Management Act 1996 & Amendments.
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14. Access to information on the Environment Regulations 1996.
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19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
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SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:
Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:
- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):
- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4.4 Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products,* September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:

- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):

- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act,1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products,* November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code",* ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case if hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

"Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

DRIMOLEAGUE CONCRETE WORKS LTD.

Suppliers of: Readymix Concrete • Blocks & Precast
Sand & Gravel • Hardcore & Crushed Rock

ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Murnane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
16. Local Government (Planning and Development) Act 1993.
17. The Heritage Act, 1995.
18. Waste Management Act 1996 & Amendments.
19. Wildlife (Amendment) Act, 2000.
20. Planning & Development Act 2000.
21. Safety, Health and Welfare at Work Act 2005 (Quarries).
22. Planning & Development (Amendment) Act, 2010.

Table of Statutory Instruments

1. Local Government (Planning and Development) Regulations 1964.
2. Local Government (Planning and Development) Regulations 1977 (SI. No.65).
3. The EC (Waste) Regulations 1979.
4. The EC (Toxic and Dangerous Waste) Regulations 1982.
5. Air Pollution 1987 (Air Quality Standards) Regulations 1987 (SI No.244).
6. Local Government (Water Pollution) Regulations 1987 (SI No.108)
7. Air Pollution 1987 (Licensing of Industrial Plant) Regulations 1988 (SI No.266) .
8. European Communities (Environmental Impact Assessment) Regulations 1989 (SI No.349).
9. The EC (Environmental Impact Assessment) Regulations 1990.
10. The EC (Asbestos Waste) Regulations 1990.
11. Local Government (Planning and Development) Regulations 1990 (SI. No.25).
12. The EC (Waste oil) Regulations 1992.
13. Local Government (Water Pollution) Regulations 1992 (SI No.271).
14. Access to information on the Environment Regulations 1996.
15. The EC (Waste) Regulations 1994.
16. Environmental Protection Agency Act 1992 (Commencement) Order 1994 (SI No.82).
17. Environmental Protection Agency (Licensing) Regulations 1994.
18. European Communities (Environmental Impact Assessment) (Amendment) Regulations 1994 (SI No.84).
19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
20. Local Government (Planning and Development) Regulations 2001 (SI No. 600).
21. Planning & Development (Amendment (No. 2) Regulations 2015 (SI No. 310).
22. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296).
23. Health and Welfare at Work (Quarries) Regulations 2008 (SI No. 28).
24. Safety, Health and Welfare at Work Act 2005 (Quarries) (Repeals and Revocations) (Commencement) Order 2008 (SI No. 29)
25. Safety, Health and Welfare at Work (Quarries)(Amendment) Regulations 2013 (SI No. 9)

List of Technical Reference Documents

1. Sand and Gravel Association (SAGA) Code of Practice, August 1991.
2. BACMI The British Aggregate Construction Materials Industries, Environmental Code, March 1992.
3. The Extractive Industry and the Environment in Ireland, Britain and the rest of the EC. Irish Mining and Quarrying Society Conference 1993.
4. Environmental Practices and Audit Checklist for the Ready Mixed Concrete Industry. ERMCO 1996.
5. Secretary of State's Guidance - Blending, packing, loading and use of bulk cement. Department of the Environment, London, February 1991.
6. Secretary of State's Guidance - Quarry Processes - PG3/9 (96) Department of the Environment, London.
7. Secretary of State's Guidance - Mineral Drying and Roadstone - Coating Processes, PG3/15 (96) Department of the Environment, London.
8. Secretary of State's Guidance - Mobile Crushing and Screening - Processes, PG3/16 (96) Department of the Environment, London.
9. Minerals Planning Guidance: The control of noise at surface mineral workings (MPG 11), Department of Environment, London, April 1993.
10. Quarries and Ancillary Activities, Guidelines for Planning Authorities, Dept. of the Environment, Heritage & Local Government, April 2004
11. Environmental Management in the Extractive Industry, EPA, 2005.
12. Environmental Management Guidelines – Environmental Management in the Extractive Industry (non- Schedule Minerals), EPA 2006.
13. Geological Heritage Guidelines for the Extractive Industry, Geological Survey of Ireland 2008.
14. Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry, Notice Nature 2009.
15. Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation, 2009.
16. Code of Practice: Wastewater Treatment Systems for Single Houses, EPA, 2010.
17. Environmental Protection Agency (EPA). Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities, 2012.

SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:

Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:

- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):

- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4.4 Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products,* September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:

- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):

- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act, 1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products,* November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code"*, ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case If hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

"Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

DRIMOLEAGUE CONCRETE WORKS LTD.

Suppliers of: Readymix Concrete • Blocks & Precast
Sand & Gravel • Hardcore & Crushed Rock

ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Murnane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
16. Local Government (Planning and Development) Act 1993.
17. The Heritage Act, 1995.
18. Waste Management Act 1996 & Amendments.
19. Wildlife (Amendment) Act, 2000.
20. Planning & Development Act 2000.
21. Safety, Health and Welfare at Work Act 2005 (Quarries).
22. Planning & Development (Amendment) Act, 2010.

Table of Statutory Instruments

1. Local Government (Planning and Development) Regulations 1964.
2. Local Government (Planning and Development) Regulations 1977 (SI. No.65).
3. The EC (Waste) Regulations 1979.
4. The EC (Toxic and Dangerous Waste) Regulations 1982.
5. Air Pollution 1987 (Air Quality Standards) Regulations 1987 (SI No.244).
6. Local Government (Water Pollution) Regulations 1987 (SI No.108)
7. Air Pollution 1987 (Licensing of Industrial Plant) Regulations 1988 (SI No.266) .
8. European Communities (Environmental Impact Assessment) Regulations 1989 (SI No.349).
9. The EC (Environmental Impact Assessment) Regulations 1990.
10. The EC (Asbestos Waste) Regulations 1990.
11. Local Government (Planning and Development) Regulations 1990 (SI. No.25).
12. The EC (Waste oil) Regulations 1992.
13. Local Government (Water Pollution) Regulations 1992 (SI No.271).
14. Access to information on the Environment Regulations 1996.
15. The EC (Waste) Regulations 1994.
16. Environmental Protection Agency Act 1992 (Commencement) Order 1994 (SI No.82).
17. Environmental Protection Agency (Licensing) Regulations 1994.
18. European Communities (Environmental Impact Assessment) (Amendment) Regulations 1994 (SI No.84).
19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
20. Local Government (Planning and Development) Regulations 2001 (SI No. 600).
21. Planning & Development (Amendment (No. 2) Regulations 2015 (SI No. 310).
22. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296).
23. Health and Welfare at Work (Quarries) Regulations 2008 (SI No. 28).
24. Safety, Health and Welfare at Work Act 2005 (Quarries) (Repeals and Revocations) (Commencement) Order 2008 (SI No. 29)
25. Safety, Health and Welfare at Work (Quarries)(Amendment) Regulations 2013 (SI No. 9)

List of Technical Reference Documents

1. Sand and Gravel Association (SAGA) Code of Practice, August 1991.
2. BACMI The British Aggregate Construction Materials Industries, Environmental Code, March 1992.
3. The Extractive Industry and the Environment in Ireland, Britain and the rest of the EC. Irish Mining and Quarrying Society Conference 1993.
4. Environmental Practices and Audit Checklist for the Ready Mixed Concrete Industry. ERMCO 1996.
5. Secretary of State's Guidance - Blending, packing, loading and use of bulk cement. Department of the Environment, London, February 1991.
6. Secretary of State's Guidance - Quarry Processes - PG3/9 (96) Department of the Environment, London.
7. Secretary of State's Guidance - Mineral Drying and Roadstone - Coating Processes, PG3/15 (96) Department of the Environment, London.
8. Secretary of State's Guidance - Mobile Crushing and Screening - Processes, PG3/16 (96) Department of the Environment, London.
9. Minerals Planning Guidance: The control of noise at surface mineral workings (MPG 11), Department of Environment, London, April 1993.
10. Quarries and Ancillary Activities, Guidelines for Planning Authorities, Dept. of the Environment, Heritage & Local Government, April 2004
11. Environmental Management in the Extractive Industry, EPA, 2005.
12. Environmental Management Guidelines – Environmental Management in the Extractive Industry (non- Schedule Minerals), EPA 2006.
13. Geological Heritage Guidelines for the Extractive Industry, Geological Survey of Ireland 2008.
14. Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry, Notice Nature 2009.
15. Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation, 2009.
16. Code of Practice: Wastewater Treatment Systems for Single Houses, EPA, 2010.
17. Environmental Protection Agency (EPA). Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities, 2012.

SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:
Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:

- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):

- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4.4 Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products*, September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:

- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):

- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act,1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products*, November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code"*, ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case If hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

"Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

DRIMOLEAGUE CONCRETE WORKS LTD.

Suppliers of: Readymix Concrete • Blocks & Precast
Sand & Gravel • Hardcore & Crushed Rock

ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Murnane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
16. Local Government (Planning and Development) Act 1993.
17. The Heritage Act, 1995.
18. Waste Management Act 1996 & Amendments.
19. Wildlife (Amendment) Act, 2000.
20. Planning & Development Act 2000.
21. Safety, Health and Welfare at Work Act 2005 (Quarries).
22. Planning & Development (Amendment) Act, 2010.

Table of Statutory Instruments

1. Local Government (Planning and Development) Regulations 1964.
2. Local Government (Planning and Development) Regulations 1977 (SI. No.65).
3. The EC (Waste) Regulations 1979.
4. The EC (Toxic and Dangerous Waste) Regulations 1982.
5. Air Pollution 1987 (Air Quality Standards) Regulations 1987 (SI No.244).
6. Local Government (Water Pollution) Regulations 1987 (SI No.108)
7. Air Pollution 1987 (Licensing of Industrial Plant) Regulations 1988 (SI No.266) .
8. European Communities (Environmental Impact Assessment) Regulations 1989 (SI No.349).
9. The EC (Environmental Impact Assessment) Regulations 1990.
10. The EC (Asbestos Waste) Regulations 1990.
11. Local Government (Planning and Development) Regulations 1990 (SI. No.25).
12. The EC (Waste oil) Regulations 1992.
13. Local Government (Water Pollution) Regulations 1992 (SI No.271).
14. Access to information on the Environment Regulations 1996.
15. The EC (Waste) Regulations 1994.
16. Environmental Protection Agency Act 1992 (Commencement) Order 1994 (SI No.82).
17. Environmental Protection Agency (Licensing) Regulations 1994.
18. European Communities (Environmental Impact Assessment) (Amendment) Regulations 1994 (SI No.84).
19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
20. Local Government (Planning and Development) Regulations 2001 (SI No. 600).
21. Planning & Development (Amendment (No. 2) Regulations 2015 (SI No. 310).
22. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296).
23. Health and Welfare at Work (Quarries) Regulations 2008 (SI No. 28).
24. Safety, Health and Welfare at Work Act 2005 (Quarries) (Repeals and Revocations) (Commencement) Order 2008 (SI No. 29)
25. Safety, Health and Welfare at Work (Quarries)(Amendment) Regulations 2013 (SI No. 9)

List of Technical Reference Documents

1. Sand and Gravel Association (SAGA) Code of Practice, August 1991.
2. BACMI The British Aggregate Construction Materials Industries, Environmental Code, March 1992.
3. The Extractive Industry and the Environment in Ireland, Britain and the rest of the EC. Irish Mining and Quarrying Society Conference 1993.
4. Environmental Practices and Audit Checklist for the Ready Mixed Concrete Industry. ERMCO 1996.
5. Secretary of State's Guidance - Blending, packing, loading and use of bulk cement. Department of the Environment, London, February 1991.
6. Secretary of State's Guidance - Quarry Processes - PG3/9 (96) Department of the Environment, London.
7. Secretary of State's Guidance - Mineral Drying and Roadstone - Coating Processes, PG3/15 (96) Department of the Environment, London.
8. Secretary of State's Guidance - Mobile Crushing and Screening - Processes, PG3/16 (96) Department of the Environment, London.
9. Minerals Planning Guidance: The control of noise at surface mineral workings (MPG 11), Department of Environment, London, April 1993.
10. Quarries and Ancillary Activities, Guidelines for Planning Authorities, Dept. of the Environment, Heritage & Local Government, April 2004
11. Environmental Management in the Extractive Industry, EPA, 2005.
12. Environmental Management Guidelines – Environmental Management in the Extractive Industry (non- Schedule Minerals), EPA 2006.
13. Geological Heritage Guidelines for the Extractive Industry, Geological Survey of Ireland 2008.
14. Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry, Notice Nature 2009.
15. Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation, 2009.
16. Code of Practice: Wastewater Treatment Systems for Single Houses, EPA, 2010.
17. Environmental Protection Agency (EPA). Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities, 2012.

SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:
Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:
- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):
- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4. 4Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code",* ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products,* September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):
- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act,1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products,* November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code"*, ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case If hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

"Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

DRIMOLEAGUE CONCRETE WORKS LTD.

Suppliers of: Readymix Concrete • Blocks & Precast
Sand & Gravel • Hardcore & Crushed Rock

ENVIRONMENTAL MANAGEMENT SYSTEM

DRIMOLEAGUE CONCRETE WORKS LTD

UMMERA SAND/GRAVEL PIT
UMMERA,
MACROOM
COUNTY CORK

JANUARY 2020

Environmental Management System - Contents

ENVIRONMENTAL POLICY

Drimoleague Concrete Works Ltd.

is a provider of natural aggregates, ready-mix concrete and construction materials operating in County Cork at

1. Bredagh Cross, Drimoleague (concrete batching and block plant)
2. Coolbane Caheragh Drimoleague (rock quarry)
3. Inchafune Dunmanway (sand & gravel pit)
4. Ballard Castletownbere (concrete batching)
5. Ummera Macroom (sand & gravel pit)

We recognise that each activity, product and service that we provide has a potential impact on the environment and the local community. Our objective is to minimise the environmental impacts and where practicable provide environmental benefit.

The company is committed to compliance with existing legislation, prevention of pollution and continuous improvement of environmental management.

To ensure that environmental impacts are controlled and minimised and that our objectives & commitments are achieved we have established and will maintain an Environmental Management System.

This system is part of the overall management system for the sites and will enable us to provide materials and services to society in a manner which ensures that we meet our environmental obligations.

Signed_____01/01/2020
Managing Director

MANAGEMENT ORGANISATION & RESPONSIBILITIES.

Directors – Drimoleague Concrete Works Ltd

Eugene Murnane

Fiona Murnane

****

General Manager - Drimoleague Concrete Works Ltd
&
Environmental Manager - Drimoleague Concrete Works Ltd

Eugene Murnane

****

Ummera Gravel Pit – Quarry Manager

Roy Kingston

****

Health & Safety Officer – AllSafe Risk Management & Safety Consultancy Ltd

Peter Fehily

****

Name	Location	Contact Number
Eugene Murnane	Bredagh Cross	086-8379662
Fiona Murnane	Lahadane, Bantry	027-50198
Eugene Murnane	Bredagh Cross	086-8379662
Roy Kingston	Ummera	086-8365287
Peter Fehily	AllSafe – Wilton, Cork	021-4347436 086-2463436

Specialist are engaged to carry out environmental monitoring.

LIST OF RELEVANT IRISH PLANNING AND ENVIRONMENTAL LEGISLATION

Table of Statutes

1. The Forestry Act 1946.
2. Local Government (Planning and Development) Act 1963.
3. Local Government (Planning and Development) Act 1976.
4. Local Government (Water Pollution) (Amendment) Act 1976.
5. Local Government (Water Pollution) Act 1977.
6. Local Government (Planning and Development) Act 1982.
7. Local Government (Planning and Development) Act 1983.
8. Air Pollution Act 1987.
9. Safety, Health and Welfare at Work Act 1989.
10. Derelict Sites Act 1990.
11. Local Government (Water Pollution) Act 1990.
12. Local Government (Planning and Development) Act 1990.
13. Local Government (Planning and Development) Act 1991.
14. Local Government (Planning and Development) Act 1992.
15. Environmental Protection Agency Act 1992.
16. Local Government (Planning and Development) Act 1993.
17. The Heritage Act, 1995.
18. Waste Management Act 1996 & Amendments.
19. Wildlife (Amendment) Act, 2000.
20. Planning & Development Act 2000.
21. Safety, Health and Welfare at Work Act 2005 (Quarries).
22. Planning & Development (Amendment) Act, 2010.

Table of Statutory Instruments

1. Local Government (Planning and Development) Regulations 1964.
2. Local Government (Planning and Development) Regulations 1977 (SI. No.65).
3. The EC (Waste) Regulations 1979.
4. The EC (Toxic and Dangerous Waste) Regulations 1982.
5. Air Pollution 1987 (Air Quality Standards) Regulations 1987 (SI No.244).
6. Local Government (Water Pollution) Regulations 1987 (SI No.108)
7. Air Pollution 1987 (Licensing of Industrial Plant) Regulations 1988 (SI No.266) .
8. European Communities (Environmental Impact Assessment) Regulations 1989 (SI No.349).
9. The EC (Environmental Impact Assessment) Regulations 1990.
10. The EC (Asbestos Waste) Regulations 1990.
11. Local Government (Planning and Development) Regulations 1990 (SI. No.25).
12. The EC (Waste oil) Regulations 1992.
13. Local Government (Water Pollution) Regulations 1992 (SI No.271).
14. Access to information on the Environment Regulations 1996.
15. The EC (Waste) Regulations 1994.
16. Environmental Protection Agency Act 1992 (Commencement) Order 1994 (SI No.82).
17. Environmental Protection Agency (Licensing) Regulations 1994.
18. European Communities (Environmental Impact Assessment) (Amendment) Regulations 1994 (SI No.84).
19. Local Government (Planning and Development) Regulations 1994 (SI No. 86).
20. Local Government (Planning and Development) Regulations 2001 (SI No. 600).
21. Planning & Development (Amendment (No. 2) Regulations 2015 (SI No. 310).
22. European Union (Planning and Development) (Environmental Impact Assessment) Regulations 2018 (SI No. 296).
23. Health and Welfare at Work (Quarries) Regulations 2008 (SI No. 28).
24. Safety, Health and Welfare at Work Act 2005 (Quarries) (Repeals and Revocations) (Commencement) Order 2008 (SI No. 29)
25. Safety, Health and Welfare at Work (Quarries)(Amendment) Regulations 2013 (SI No. 9)

List of Technical Reference Documents

1. Sand and Gravel Association (SAGA) Code of Practice, August 1991.
2. BACMI The British Aggregate Construction Materials Industries, Environmental Code, March 1992.
3. The Extractive Industry and the Environment in Ireland, Britain and the rest of the EC. Irish Mining and Quarrying Society Conference 1993.
4. Environmental Practices and Audit Checklist for the Ready Mixed Concrete Industry. ERMCO 1996.
5. Secretary of State's Guidance - Blending, packing, loading and use of bulk cement. Department of the Environment, London, February 1991.
6. Secretary of State's Guidance - Quarry Processes - PG3/9 (96) Department of the Environment, London.
7. Secretary of State's Guidance - Mineral Drying and Roadstone - Coating Processes, PG3/15 (96) Department of the Environment, London.
8. Secretary of State's Guidance - Mobile Crushing and Screening - Processes, PG3/16 (96) Department of the Environment, London.
9. Minerals Planning Guidance: The control of noise at surface mineral workings (MPG 11), Department of Environment, London, April 1993.
10. Quarries and Ancillary Activities, Guidelines for Planning Authorities, Dept. of the Environment, Heritage & Local Government, April 2004
11. Environmental Management in the Extractive Industry, EPA, 2005.
12. Environmental Management Guidelines – Environmental Management in the Extractive Industry (non- Schedule Minerals), EPA 2006.
13. Geological Heritage Guidelines for the Extractive Industry, Geological Survey of Ireland 2008.
14. Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry, Notice Nature 2009.
15. Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation, 2009.
16. Code of Practice: Wastewater Treatment Systems for Single Houses, EPA, 2010.
17. Environmental Protection Agency (EPA). Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities, 2012.

SECTION 4 - ENVIRONMENTAL GUIDELINES

Introduction

These Guidelines provide advice on possible Environmental Standards and Emission Limit Values to be adopted in accordance with the BATNEEC principle (Best Available Technology Not Entailing Excessive Cost).

Note: The Irish Concrete Federation Environmental Code shall apply where no particular environmental standards have been set for the Location in applicable Planning Permissions, Air Pollution Licenses, Water Discharge Licences, etc.

Areas of Environmental Concern

Noise Control

Control of Air Emissions

Water Management

Waste Management

Visual Amenity & Housekeeping

Archaeology, Ecology & Reinstatement

Energy and Transport

Security & Public Safety

Section 4.1 - Environmental Guidelines on Noise Control

Introduction
The guideline provides advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to general quarry operations including overburden removal, washing & screening, and materials handling & loading.

Emissions Limit Values:		
Parameter	**Emissions Standard**	**Basis of Standard**
Noise-day (08.00-20.00 hours)	<55 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code
Noise-night (20.00-08.00 hours)	<45 dB (A)	EPA Environmental Management Guidelines ICF Environmental Code

Monitoring of Emissions:
Noise monitoring at property boundaries confirm noise levels are well within emission limit values.
Repeat noise monitoring every 5 years, during investigation of received noise complaint or following significant change in operations.
Noise measurement to be monitored for a period of 1 hour.

Guideline Basis/Useful References:
- International Standard ISO 1996-2:2017. *Acoustics – Description, measurement and Assessment of environmental noise, Part 2: Determination of environmental noise levels.* International Standards Organisation, 2017.
- BS 5228:2009+A1:2014. *Code of practice for noise and vibration control on construction and open sites Part 1: Noise.* British Standards Institution, 2014.
- *Guidance Note for Noise: Licence Applications, Surveys and Assessments in Relation to Scheduled Activities.* EPA, 2012.
- *'Environmental Management in the Extractive Industry'.* EPA 2006.
- *Environmental Code.* ICF, Dublin, 2005 Revised Edition.

Some possible Actions to Control Noise (refer BATNEEC principle):
- Where practical, operate within day hours.
- Close door of buildings.
- Repair damaged cladding of buildings.
- Regular maintenance of noisy plant & equipment.
- Use rubber or polyurethane cloths in screens.
- Enclose noisy equipment such as, crushers, screens, burners, compressors, etc.
- Fit silencers or attenuators.
- Fit anti-vibration mountings.
- Place screening berms.
- In relation to control of noise, maintain plant & equipment, deal promptly with malfunctions and train staff.
- Impose speed limits within site/facility boundaries.

Section 4.2 - Environmental Guidelines on Control of Air Emissions

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

This guidance refers to operations including loading materials & blocks and crushing stone.

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Measured total solids deposition rate	<350 mg/m²/day (Total=Soluble+ Insoluble)	T.A. Luft
Visibility of dust emission	Aim for no visible dust emissions	ICF

Monitoring of Emissions to Air:
- Visually check emissions at least once per day–aim to minimise visible dust/smoke/fume emissions.
- Measure fugitive dust deposition levels at least twice per annum (using T.A. Luft Bergerhoff Gauges at three locations along the property perimeter)

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006

Some Possible Actions to Control Emissions to Air (refer BAT principle):
- Hard surface internal roadways with compacted stone generally and with macadam or concrete to exit.
- Apply a 15kph speed limit on all internal site roads.
- Keep roadways clean or wet with adequate drains to avoid ponding.
- Install a wheel-wash where necessary – ensure use, keep clean & filled with water.
- Ensure all vehicle exhausts are vertical & modify dumptruck radiator fans to minimise dust rising.
- Use deep trough conveyors at ground level to minimise wind whipping.
- Enclose conveyors if needed to minimise wind whipping (check strength of structure for increased wind loading) & fit belt scrapers.
- Fit last meter of stockpile conveyors & first 0.5 metre of the fall with a full hood, and use water suppression.
- Fit properly sized filters on top of bulk powder silos and control filling/blowing rate.
- Condition material containing 0-5mm fines with water before handling.
- Place stockpiles in sheltered areas; construct & profile stockpiles to minimise wind-entrainment
- Load to & from stockpiles and load trucks so as to minimise the generation of airborne dust.
- Sheet or dampen trucks loaded with material containing 0-3mm fines – as soon as possible after loading.
- Avoid the generation of smoke – do not burn rubbish.
- In relation to control of emissions, maintain plant & equipment, deal promptly with malfunctions and train staff.

Section 4.3 - Environmental Guidelines on Water Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Emissions Limit Value:		
Parameter	**Emission Standard**	**Basis of Standard**
Total suspended solids	<=35 mg/litre	ICF
Biological Oxygen Demand	<= 25 mg/ litre	ICF
pH	<= 9	ICF

Monitoring of Water Discharges (where appropriate):

- Check quality of discharge quarterly or as conditioned in planning permission/discharge licence.
- Visually check discharges at least once per month.
- Visually check settlement lagoons at least once per month for efficiency.
- Monitoring water quality in the receiving water courses upstream and downstream of the site.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage and Protect Water Quality (refer BAT principle):

- Eliminate discharges if possible.
- Minimise use of water generally.
- Maximise catchment and recycling of process water and storm water (as appropriate).
- Recycle water from washouts and wheel wash by use of suitable settlement tanks.
- Ensure sewage treatment facilities are fully functional and comply with good practice.
- Ensure fuel oils are properly bunded, attachments and pumps inside the bund.
- Install an oil class interceptor to receive surface water in the area of bunded fuel tanks or as appropriate.
- Minimise use of drummed products, see also Section 4.4 Waste Management.
- Refer also to Section 5 on Emergency Response Procedures.

Section 4.4 - Environmental Guidelines on Waste Management

Introduction
The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:
- Check property regularly for waste generation

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Waste (refer BAT principle):
- Minimise production of waste generally.
- Maximise recycling through careful separation of waste streams.
- Maintain designated areas for different streams such as metal, timber, tyres, batteries, oils/filters etc.
- Install suitable arrangements for storing old batteries, oil filters etc.
- Appoint specialist contractors for the collection and disposal of wastes as appropriate.
- If appropriate, specify that suppliers remove the old component when supplying new ones.
- Discontinue use of drums or IBCs by installing tanks for bulk deliveries.
- Use Just In Time purchasing techniques, if possible, where drum supplies must continue.
- Ensure staff are aware of need for diligence where waste is concerned by ongoing training.
- Where applicable, ensure returned concrete is reused immediately or recycled regularly to void being contaminated and becoming a waste product.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.5 - Environmental Guidelines on Visual Amenity & Housekeeping

Introduction
The guideline provides advice on possible actions to improve visual amenity & housekeeping.

Monitoring:
- Check property regularly

Guideline Basis/Useful References:
- *"Environmental Code"*, ICF, Dublin, 2005 Revision
- Down, C.G. "Amenity Banks and Quarry Landscaping", *Quarry Management and Products,* September 1997

Some Possible Actions to Improve Visual Amenity (-refer BATNEEC principle):

- Keep entrance tidy.
- Tidy up litter and remove unsightly features.
- Clean up spillages.
- Keep scrap in designated areas.
- Maintain buildings in good condition and renew paintwork regularly.
- Repair damaged cladding on buildings.
- Maintain signs in good condition.
- Maintain lighting and roadways and entrances.
- Place screening berms to minimise visual impact.
- Profile overburden mounds with regard to visual amenity avoiding long, uniform banks.
- Seed newly constructed overburden mounds.
- Where necessary, plant hawthorn hedging along the property boundary to provide a tough, hardy, fast growing and inexpensive dense barrier.
- Where applicable, minimise and monitor dust & smoke emissions.
- Where applicable, ensure discharged water is clear of silt & free of oil traces.
- Where applicable, phase the final restoration of the site.

Section 4.6 - Environmental Guidelines on Archaeology, Ecology & Reinstatement

Introduction
The guideline provides advice on possible actions to improve protection of Archaeology & Ecology.

Monitoring:
- Check property regularly
- Check water discharges regularly

Guideline Basis/Useful References
- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Irish Field Monuments"*, Edition, 1991, Stationery Office, Dublin.
- *"Geological Heritage Guidelines for the Extractive Industry"*, Geological Survey of Ireland 2008.
- *"Wildlife, Habitats & the Extractive Industry – Guidelines for the Protection of Biodiversity with the Extractive Industry"*, Notice Nature 2009.
- *"Code of Practice between the Department of the Environment, Heritage and Local Government and the Irish Concrete Federation"*, 2009

Some Possible Actions to Improve Archaeology & Ecology Management (-refer BATNEEC principle):
- Refer to the Record of Monuments and Places for your county before carrying out soil stripping operations (copies may be obtained from the ICF Archaeology Manager). Give two months notice to the Monuments Section, Department of the Environment, Heritage and Local Government of your intention to carry out works within an archaeological zone defined within the record.
- Report discoveries of archaeological features or artefacts to the Chief Archaeologist, Monuments Section, Department of the Environment, Heritage and Local Government, or the ICF Archaeology Manager can report them on your behalf. If you require any advice regarding archaeology contact the ICF Archaeology manager.
- Protect habitats, including hedgerows, which have had to be removed
- Plant new hawthorn hedging along the property boundary to provide a trough, hardy fast growing and inexpensive barrier which will protect colonising vegetation & will provide visual amenity.
- Give at least 21 days notice to Gardai of intention to fell trees using a Felling Notice to be obtained at any Gardai station.
- Plant new native trees to replace trees, which have had to be removed.
- Contain dust emissions.
- Ensure discharged water is clear of silt & free of oil traces.
- Progress after use plans.

Section 4.7 - Environmental Guidelines on Energy and Transport Management

Introduction

The guideline provides general advice on possible actions to improve environmental performance and to minimise impacts in accordance with the BAT the principle (Best Available Technology).

Monitoring:

- Regularly monitor energy usage and, annually, review implementation of improvements and controls on the site.
- Review the fleet management arrangements regularly.
- Check access for dust and other emissions associated with transport fleet.

Guideline Basis/Useful References:

- *"Environmental Code"*, ICF, Dublin, 2005 Revised Edition.
- *"Environmental Management in the Extractive Industry"*, EPA, 2006.

Some Possible Actions to Manage Energy and Transport (refer BAT principle):

- Isolate energy usage, where possible, on existing plant and analyse usage against appropriate units (production, hours of operation etc.).
- Give energy efficiency a high priority in new plant purchases.
- Maintain and service plant and fleet so that they operate as efficiently as possible.
- Maintain fuel management system for fleet linked to milometer or tachometer reading of each vehicle (input required when re-fuelling).
- Maintain vehicle cleanliness when leaving the site by the provision of wheel cleaning facilities on exiting and efficient truck washing facilities on site.
- Where possible, route traffic away from sensitive areas, especially early morning and late evening
- Make provision for cleaning public roads in case of accidental spillages.
- When despatching fine materials (<3mm), either sheet or dampen load to avoid dust emissions
- Where possible, avoid traffic queues outside plant by provision of sufficient queuing and parking space inside the site itself.
- Recycle tyres, batteries, oil etc; refer to Section 4.4 on Waste Management.
- Refer also to Section 4.5 on Visual Amenity & Housekeeping.

Section 4.8 - Environmental Guidelines on Security & Public Safety

Introduction

The guideline provides advice on possible actions to improve locations security and public safety.

Monitoring of Security & Public Safety:-

- Check that lifebelts are in place at ponds – at least each month
- Check that fencing is in place at ponds – at least each month
- Check perimeter fencing & signs – at least each quarter
- At a minimum, fences should be designed to keep out farm animals & toddlers and to prevent easy access by adults.
- Signs should read **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER**

Guideline Basis/Useful References:

- Occupier's Liability Act,1995.
- Specification for Chain Link Fences up to 1.8 high BS 1722:part 1:1986.
- Down, C.G. "Amenity Banks and quarry Landscaping", *Quarry Management and Products*, November 1997.
- Local Government (Planning & Development) Regulations, 1994, S.1. No.86 of 1994.
- *"Environmental Code"*, ICF, Dublin 2005 Revised Edition.

Some Possible Actions to Improve Security (-refer BATNEEC principle):

- Post **DANGER//HAZARD IDENTIFICATION/DO NOT ENTER** signs along property boundary.
- Post **DANGER/HAZARD IDENTIFICATION/DO NOT ENTER** signs at ponds & water bodies.
- Safety warning notices should be clearly visible from all along the length of the fence, give clear warning of the danger, prohibit entry, be of black text on yellow background and should include an appropriate pictorial symbol of the danger to warn children or those who cannot read.
- Erect fence along property boundary and around ponds.
- Place large boulders along side of roads over high fences.
- Fences should be designed to keep out farm animals & toddlers and to prevent casual access by adults.
- 1.4m general purpose chain link with 1 row of barbed wire to keep out farm animals & toddlers and to prevent casual access by adults – refer BS 1722; Part 1:1986.
- Barbed wire should be fixed so as to be clearly apparent and not be a hidden hazard. Any dangers from the fence must be obvious to the trespasser and it is necessary to ensure that the trespasser can only be harmed by his own decision to risk the danger.
- Fences under 2m in height are classed as "exempt development" not requiring planning permission.
- Advise Gardai of trespassers.
- Promptly clear material spills on public roads.
- Fences, gates, signs & hedgerows need to be regularly inspected and needs to be maintained (Assign Person for this task).

Environmental Guidelines on Security (Contd.)

The following are examples of possible **Warning Signs:-**

DANGER
High Quarry Faces
DO NOT ENTER

DANGER
Deep Water
NO SWIMMING – NO FISHING
DO NOT ENTER

DANGER
Quarry Traffic
HAULIERS MUST STOP AT WEIGHBRIDGE

DANGER
Quarry Machinery
ALL VISITORS MUST REPORT TO OFFICE

SECTION 5 - ENVIRONMENTAL EMERGENCY RESPONSE PROCEDURE

To ensure that environmental accidents and potential emergency situations relating to oil and chemical spills are dealt with in an appropriate manner, it is necessary to identify the potential occurrence and appropriate response to such incidents and to prevent and mitigate any associated harm to human health and the environment.

Oil and chemical spills present a great environmental risk to this business, and as such, spill response is a key competency requirement for the Environment Manager. However, in the event of spillage, it is imperative that all staff are aware of the need for immediate implementation of containment measures and communication with Environment Manager.

The Environment Manager, or his nominee, is responsible for carrying out this procedure in the event of a spillage. It is the responsibility of the individual who discovers the spill to:

- Immediately contain the spill ONLY IF IT IS POSSIBLE AND SAFE TO DO SO.
- Report it immediately to the Environment Manager.

If a spill occurs out of hours, the Manager or his nominee shall be contacted for advice. The Environment Manager shall identify the substances involved, direct the response accordingly and contact the appropriate personnel and external emergency services as necessary. Where the spill is of a high risk nature, the Environment Manager shall inform the Managing Director and, if appropriate, the Regulatory Authorities.

It is the responsibility of the Environment Manager concerned to ensure that all personnel are trained and are aware of this procedure and that it is periodically tested.

The Environment Manager concerned will ensure all sources of ignition are extinguished. In the event of a fire the Fire Safety Procedure shall be followed. Keep the area well ventilated if the spill is in a confined space. Ensure that all unnecessary untrained personnel are kept well away from the scene. The main risk associated with oil or chemical spills is the potential for the spill to enter drains watercourses, soils and the ground water system, causing contamination and/or fire or explosion risk. Site drainage is detailed on individual site plans, copy held by the Environment Manager.

Identify the material spilled and obtain the MSDS to ensure that handling and PPE requirements are clearly understood and that those tackling the spill are wearing the appropriate PPE. Stop the spill and contain it as best as possible, use the materials provided in the Environmental Spill Kits and ensure that the drains in the surrounding areas are sealed. Spill kits shall be maintained in the garage and chemical storage areas.

Remediation depends on the impact the contaminant has on the receptor. Remediation may involve aeration, addition of biological surfactants and restocking of fish reserves. Contact the appropriate government or concerned body to discuss, as and when required. Any waste or contaminated materials generated during the clean up of a spill shall be disposed of as per the Waste Management Guidelines.

A report form shall be completed by the Environmental Manager and reviewed after each incident by the whole management team.

This emergency Response Procedure shall be tested at least once annually under the direction of the Environmental Manager. These drills cover both key personnel and operatives whose work involves a significant degree of environmental risk. These drills will either comprise of items 1 and/or 2 below:

1. A "desktop" exercise conducted where the Manager or personnel concerned is questioned closely on how he/they would respond to various environmental incidents. Responses are compared to the procedure. Immediately on completing the desktop exercise, a follow-up check is carried out to verify the actual availability of any spill kit etc. that would have been used.

2. A drill involving the practical demonstration of spill kit materials – (booms, pads, granules etc.) and how they would be used/deployed in various environmental accidents.

Such drills shall be followed by a review of the response conducted by the Environment Manager and changes made to training and/or the procedure as appropriate. Names of drill attendees and a brief description of the drill content will be recorded by the Environment Manager after each drill has been completed.

EMERGENCY TELEPHONE NUMBERS

CONTACT NUMBERS 086-8379662 **(Eugene Murnane)**

FIRST AIDERS - to be appointed **First Aid Box in Site Office**

EMERGENCY NUMBERS		
EMERGENCY	All Services	999 or 112
AMBULANCE	Cork University	021 454 6400
DOCTOR	Dr. Burke Dr. Casey Dr Cronin	026 41413 026 41281 026 41088
GARDAI	Macroom	026 20590
SOUTH WESTERN REGIONAL FISHERIES	Macroom	026 41221
E.S.B.	Emergency Wilton	1850 372 999 021 4544988
TELECOM	Repairs Service	1902
CORK COUNTY COUNCIL	Area Engineer Environment	026 41047 021-4532700
POISONS INFORMATION		01 8379964 01 8379966
OIL SPILLAGE RECOVERY	Atlas Oil	050 222411
	Enva	021 438 7200

SECTION 6 – HARMFUL SUBSTANCES

OPERATIONAL GUIDELINES

- Guidelines for Fuel & Fuel Tanks
- Receiving Oil, Fuel & Chemical Deliveries
- Operation & Maintenance of Oil Interceptors
- Septic Tanks
- MSDS for Diesel / Gas Oil
- MSDS for Oils, Lubricants etc.

Guidelines for Fuels and Fuel Tanks

Introduction

Fuels, (hydrocarbons, liquid chemicals, lubricating oils, greases and waste oils) should be kept at a waterproof bunded area, and treated with extreme caution. In the case If hydrocarbons and waste oils the capacity of the bund should be 110% of the largest tank volume or 25% of the total volume of tanks bunded, whichever is the greater. All valves and pumps on the tank should be contained within the bunded area. The bunded area should be fitted with a locking valve that should only be opened to discharge storm water to the interceptor. Alternatively, a sump should be provided in the floor of the bunded area to allow for a suction pipe to be inserted when discharging storm water.

Environmental Instructions

Environmental Instructions should be posted or distributed to anybody working with or in the general area of fuels. These instructions should include steps on how to deal with an oil/fuel spill. All staff should be aware of the need for immediate implementation of containment measures in the likelihood of a spillage.

Guidelines when working with fuels / lubricants:

The following guidelines should be followed when working with fuels and handling lubricants:

- There should be no smoking in and around the substances
- Ignition sources should be kept at a distance
- The Material Safety Data Sheets (MSDS) should be checked on or should be easily accessed
- PPE should be worn at all times
- When handling drums, the proper loading equipment should be used
- Stands and bunded trays should be provided
- Drums should be stored under cover and the surrounding area kept clean
- A spill kit should be present

In the event of spillage the Environment Manager is notified and he must record the details on a nonconformity notice, and the Emergency Response Procedure implemented.

RECEIVING OIL, FUEL AND CHEMICAL DELIVERIES

1.0 Scope

Receiving bulk and containerised oil, fuel and chemical deliveries should be carried out in a controlled and environmentally responsible manner to minimise the risk of spills and their environmentally harmful effects.

2.0 Bulk oil and fuel deliveries to site

Delivery requests – deliveries of oils and fuels are ordered by the Purchasing Manager, who will advise the supplier of the grade and quantity to be delivered.

All delivery drivers shall report to the site office on arrival. The Quarry Manager or his nominee who shall direct the driver to the appropriate fill or delivery point and supervise the delivery. He shall check that there is sufficient ullage to receive the complete load, monitor the delivery and ensure that after delivery all valves are properly closed and locked. The delivery driver should remain at the vehicle shut-off valve while the discharge is taking place. The Quarry Manager or his nominee shall sign the delivery note to confirm the product quantity received and that the delivery has been made correctly and safely.

Fuelling company vehicles, bowsers, generators and mobile plant – The driver shall check the ullage in the tank to receive the load, and remain at the delivery point at all times to monitor the delivery. After delivery he shall check that all valves are properly closed and locked. Drivers of lorries, vans and cars, not using the electronic key system, record the date, the vehicle registration and volume received in the office fuel log.

3.0 Spills

Any spillages occurring during delivery should be immediately dealt with as from the Emergency Response Procedure. Any waste materials generated as a result of this should be disposed of as waste.

OPERATION AND MAINTENANCE OF OIL INTERCEPTORS

(Where appropriate)

Oil interceptors must be inspected and maintained to ensure their effective operation. All interceptors shall be checked visually by the designated person for the presence of oil on an annual basis or after a recorded environmental spillage.

If oil is present

Three chambered interceptors – if any depth of oil is present in any of the interceptor chambers, it should be cleaned out ASAP by an approved special waste contractor using a vacuum tanker.

In the event of an interceptor failing and oil being released to the drain system, the Emergency Response Procedure should be followed.

Maintenance of oil interceptors

On a yearly basis, or as and when required, interceptors shall be cleaned by an approved and licensed waste contractor using a vacuum tanker as follows;

- Remove manhole cover(s)
- Remove surface oil or scum, being careful not to draw up uncontaminated water.
- Lower the vacuum tanker hose carefully to the base of the chamber and move around to draw off settled sediment or grit.
- At no time shall any personnel attempt to gain entry to the interceptor.
- At no time shall the level of water in the interceptor be lower than 50%.
- The unit shall be filled with clean water up to the invert level of the outlet pipe before recommencing interceptor operation after cleaning.
- Replace access shaft manhole cover(s) on completion of cleaning.

Disposal of wastes from interceptors

Any waste liquids or materials shall be disposed of as per the Waste Disposal Procedure.

Guidelines on Harmful Substances

a) Diesel, Gas Oil, Other Oils & Lubricants

Ref – Supplier Material Safety Data Sheet

b) Septic Tank

Introduction:
The septic tank should be located in an area where minimal activity occurs on the ground. The distribution box must be designed and constructed to ensure equal distribution among the various distribution pipes. Access manholes should be located at ground surface and covers should be visible and not allow the entry of surface water. Trees and plants are limited to a 3m distance from the tank and heavy machinery should not circulate over the percolation area

Useful References:

"Code of Practice: Wastewater Treatment Systems for Single Houses," EPA 2010.

Advantages of a Septic Tank:

- Septic tanks are a cost effective treatment system
- There is no need for external power requirements
- No noise emissions
- It is a natural treatment process
- It produces a high-quality effluent

Maintenance

In order to gain maximum performance from the septic tank regular maintenance is essential. The tank should be de-sludged at least once a year.

Maintenance is required when:
Scum is noticeable in the second chamber of the tank
Also, when the depth of the sludge in the second chamber is greater than 400mm.

c) Sealed Wastewater Tank

Where a sealed underground tank is used to collect wastewater, it shall be emptied as required by a licensed waste collection contractor.

SECTION 7 – ENVIRONMENTAL INSPECTION

(i) Audits

(ii) Monitoring Reports

(iii) Environmental Action Plan

SECTION 8 – TRAINING RECORD SHEET

Training Record – Drimoleague Concrete Works Ltd.

Employee	Safety Training (Initial and date)	Environmental Awareness (Initial and date)	Operational Work Procedures (Initial and date)	Other (Reference, initial and date)
Eugene Murnane	✓	✓	✓	
Roy Kingston	✓ (2015)	✓ (2015)	✓ (2015)	✓ (appointed QM – 2015)

Other skills referenced:

Roy has a CSCS card for operating site plant.

SECTION 9 – PERMITS, PLANT LAYOUT etc.

This section contains records of Planning Permissions, Permits, Plant Layouts, Site Layout Maps etc as applicable to Ummera Gravel Pit.

SECTION 10 – COMMUNITY RELATIONS

The Aggregate Industry provides essential building materials for the social and economic development of the Country. Without aggregates, the built environment could not be enhanced with safe, structurally sound buildings for homes, schools, offices, shops and hospitals. In terms of protection of the environment, no water or wastewater treatment systems could be constructed. The Industry recognises that each activity and product it provides has a potential impact on the environment and the overall objective of ICF members is to minimise the environmental impacts and maximise the environmental enhancements at their sites. The ICF Environmental Award Competition is held on an annual basis for the membership to promote and showcase positive and proactive on-site environmental measures that have been taken.

This company will aim at all times to be a good neighbour and play its part in the community, for example giving presentations on their work to local groups, allowing schools and other local parties interested in their activity to visit the quarry pit or plant on conducted tours or local open days or by supporting local events.

Concerns in relation to new developments at this site will be examined and designed for, where practicable and reasonable, by consulting with the public at an early stage in the development process.

To ensure good environmental practice is achieved on-site, this company is committed to maintaining an on-site Environmental Management System (EMS). As part of this EMS, this company will maintain written records of all complaints and incidents, including the company's actions to investigate the problem, the causes and necessary mitigation measures required, as applicable. The following complaints record sheet shall be used for this purpose.

Complaint Record

1.0 Date of Complaint:_____

2.0 Time: _____

3.0 Complaint Method:_____

4.0 Taken by:_____

5.0 Name & Address of Complainant:

_____

_____

6.0 Nature of Complaint:

_____

_____

_____

7.0 Detail Investigative Action Taken & Identify the Investigating Person

_____

_____

_____

Detail Weather Conditions_____

Detail Results of Investigation

_____

_____

Detail any corrective & preventative action taken

_____

_____

Detail whether complainant was contacted

_____

_____

Signed: _____ **Date:**_____

Rises

Knoc

Curraghanearla Stream

Clashavoon Stream

River Laney

River Laney

RIVER LANEY

SW1

SW2

SW3

H10

H1

H2

H3

D1

D2

D3

Raised Gravel Platforms

Settlement Ponds

Surface Water Abstraction Point

Original Settlement Pond

Concrete Plinth For Recirculation Pump

Overflow Channel

Site Office

Surface Water Cut Off Channel

Septic Tank & Percolation Area To Be Replaced By Sealed Wastewater Collection Tank

Washing Plant

Proposed Fuel Storage Shed & Refuelling Pad

Feed Hopper

300mmØ HDPE Culvert

Overflow Settlement Pond

Culvert

In-Fill Tree Planting

Site Acess Road

Site Entrance

Spring Flow

Roadside Drain

Spring Flows

Culvert

Culvert

Culvert Under Road

Culvert Under Road

Spring Flow

In-Fill Tree Planting

Proposed 2m High Screening Berm 1:1 Inner Slope, 1:3 Outer Slope With Tree Planting As Shown

Overhead Power Lines To Be Moved

Gallan Stone

Stream

Well No. 1

Well No. 2

AN BORD PLEANÁLA

11 JAN 2021

LTR DATED _____ FROM Applicant

LDG-

ABP- 20 308036

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LEGEND

Section 37L Further Development Application

Land Ownership Boundary

Extraction Boundary

Dust Monitoring Location — D1 to D3

Surface Water Monitoring Location — SW1 to SW3

Rev.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

Client: DRIMOLEAGUE CONCRETE WORKS Ltd.

Project: UMMERA GRAVEL PIT

Issue: Section 37L Further Development Application

Title: MONITORING POINTS LOCATION PLAN

Scales: 1:1250
A1-Printed Page Size

Prepared By	Checked	Date
DK	DK	5-Jan-21

Dwg. No.
Drawing No.8

KEOHANE GEOLOGICAL & ENVIRONMENTAL CONSULTANCY
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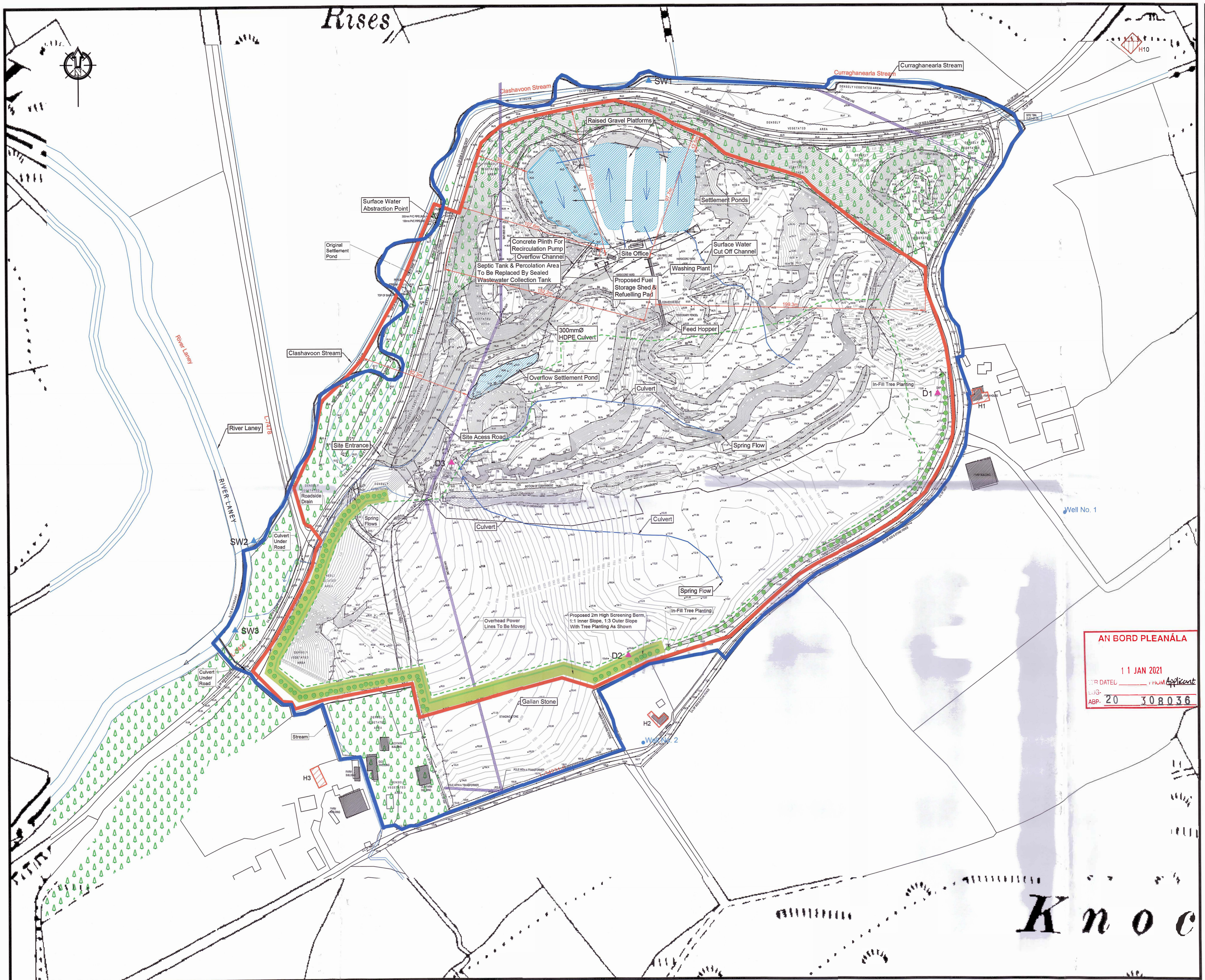
D:\DanK\Ummera Gravel Pit\Ummera Gravel Pit-Substitute Consent\Drawing No.8


Rises
Knoc
Clashavoon Stream
Curraghanearla Stream
SW1
SW2
SW3
D1
D2
D3
H1
H2
H3
H10
Raised Gravel Platforms
Settlement Ponds
Surface Water Abstraction Point
Original Settlement Pond
Concrete Plinth For Recirculation Pump
Overflow Channel
Septic Tank & Percolation Area To Be Replaced By Sealed Wastewater Collection Tank
Site Office
Surface Water Cut Off Channel
Washing Plant
Proposed Fuel Storage Shed & Refuelling Pad
300mmØ HDPE Culvert
Feed Hopper
Overflow Settlement Pond
Culvert
In-Fill Tree Planting
River Laney
Site Entrance
Site Acess Road
Spring Flow
Roadside Drain
Spring Flows
Culvert Under Road
Overhead Power Lines To Be Moved
Proposed 2m High Screening Berm. 1:1 Inner Slope, 1:3 Outer Slope With Tree Planting As Shown
Gallan Stone
Stream
Well No. 1
Well No. 2
L-7478

LEGEND

- Section 37L Further Development Application (red line)
- Land Ownership Boundary (blue line)
- Extraction Boundary (green dashed line)
- Dust Monitoring Location ▲ D1 to D3
- Surface Water Monitoring Location ▲ SW1 to SW3

Rev.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

Client
DRIMOLEAGUE CONCRETE WORKS Ltd.

Project
UMMERA GRAVEL PIT

Issue
Section 37L Further Development Application

Title
MONITORING POINTS LOCATION PLAN

Scales
1:1250
A1-Printed Page Size

Prepared By	Checked	Date
DK	DK	5-Jan-21

Dwg. No.
Drawing No.8

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Email dankeohaneivyclash@hotmail.com

D:\Dan K\Ummera Gravel Pit\Ummera Gravel Pit-Substitute Consent\Drawing No.8

Rises

Curraghanearla Stream

Clashavoon Stream

SW1

H10

Raised Gravel Platforms

Surface Water Abstraction Point

Settlement Ponds

Original Settlement Pond

Concrete Plinth For Recirculation Pump

Overflow Channel

Site Office

Surface Water Cut Off Channel

Septic Tank & Percolation Area To Be Replaced By Sealed Wastewater Collection Tank

Washing Plant

Proposed Fuel Storage Shed & Refuelling Pad

300mmØ HDPE Culvert

Feed Hopper

Clashavoon Stream

Overflow Settlement Pond

Culvert

In-Fill Tree Planting

D1

H1

River Laney

L-7478

Site Acess Road

Site Entrance

Spring Flow

D3

Roadside Drain

Spring Flows

Culvert

Culvert

Well No. 1

RIVER LANEY

SW2

Culvert Under Road

Spring Flow

In-Fill Tree Planting

Overhead Power Lines To Be Moved

Proposed 2m High Screening Berm, 1:1 Inner Slope, 1:3 Outer Slope With Tree Planting As Shown

SW3

D2

Culvert Under Road

Gallan Stone

H2

Well No. 2

Stream

H3

Knoc

AN BORD PLEANÁLA

11 JAN 2021

LTR DATED _____ FROM Applicant

LDG:

ABP: 20 308036

D:\Dank\Ummera Gravel Pit\Ummera Gravel Pit-Substitute Consent\Drawing No.8

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LEGEND

Section 37L Further Development Application

Land Ownership Boundary

Extraction Boundary

Dust Monitoring Location — D1 to D3

Surface Water Monitoring Location — SW1 to SW3

Rev.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

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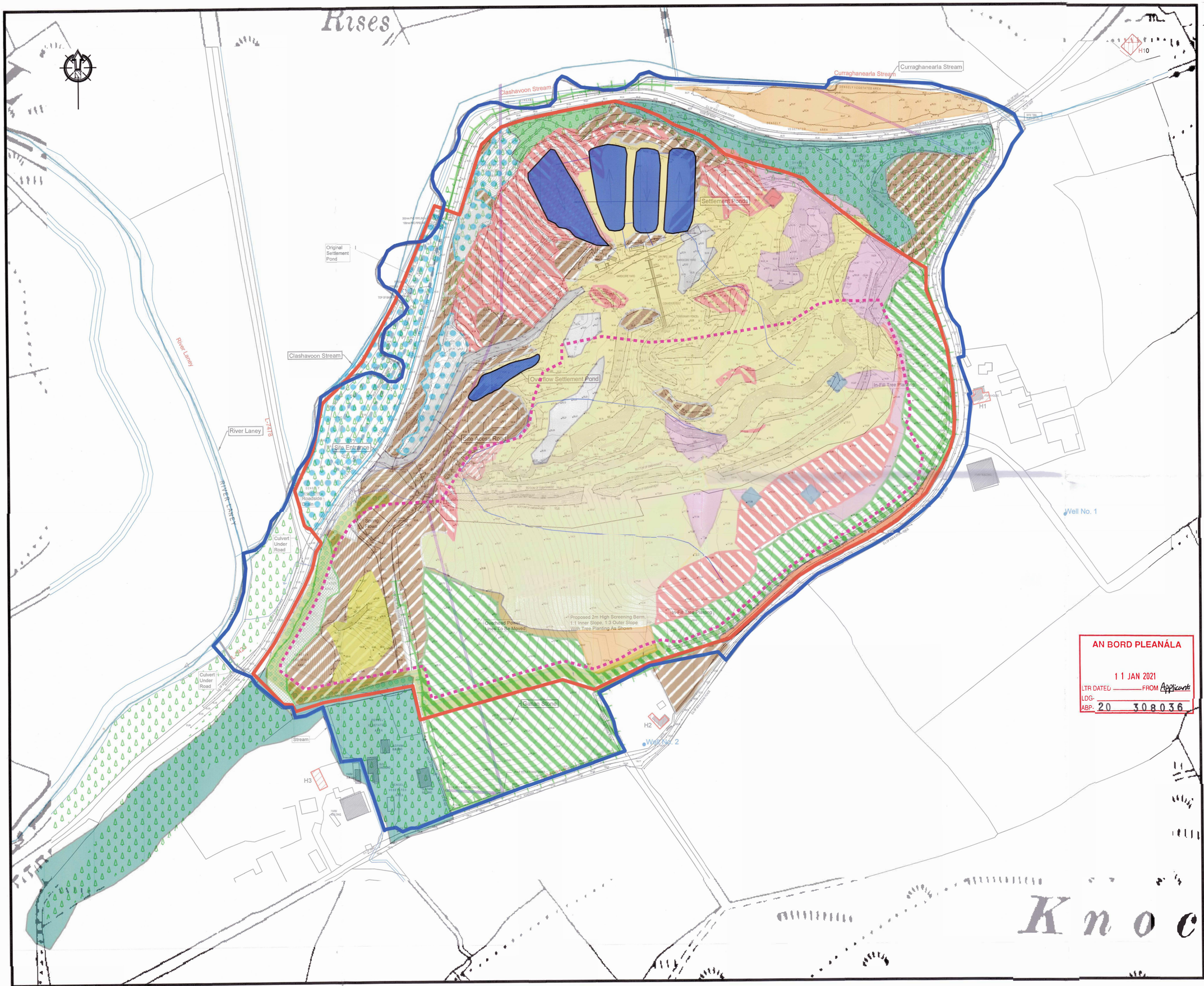

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LEGEND

Section 37L Further Development Application

Land Ownership Boundary

Extraction Boundary

Habitats

- ED2 Spoil and bare ground
- ED3 Recolonising bare ground
- ED3 - FL8
- ED4 Active quarries and mines
- ED3 - GS2
- FL8 Other artificial lakes
- FW4 Drainage ditches
- FW2 Depositing lowland river
- GS1 Neutral Grassland
- GS2 Dry meadows and grassy verges
- GS4 Wet grassland
- WD1 (Mixed) broadleaved woodland
- WL1 Hedgerows
- WL2 Treelines
- WN Semi-Natural Woodland
- WN6 Wet willow-alder-ash woodland
- WS1 Scrub
- WS1 Willow Dominated
- WS1 - ED3
- Sand Martin Colonies

Rev.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

AN BORD PLEANÁLA
11 JAN 2021
LTR DATED _____ FROM Applicant
LDG-
ABP- 20 308036

Client: DRIMOLEAGUE CONCRETE WORKS Ltd.

Project: UMMERA GRAVEL PIT

Issue: Section 37L Further Development Application

Title: HABITAT MAP

Scales: 1:1250
A1-Printed Page Size

Prepared By	Checked	Date
DK	DK	7-Jan-21

Dwg. No- Drawing No.9

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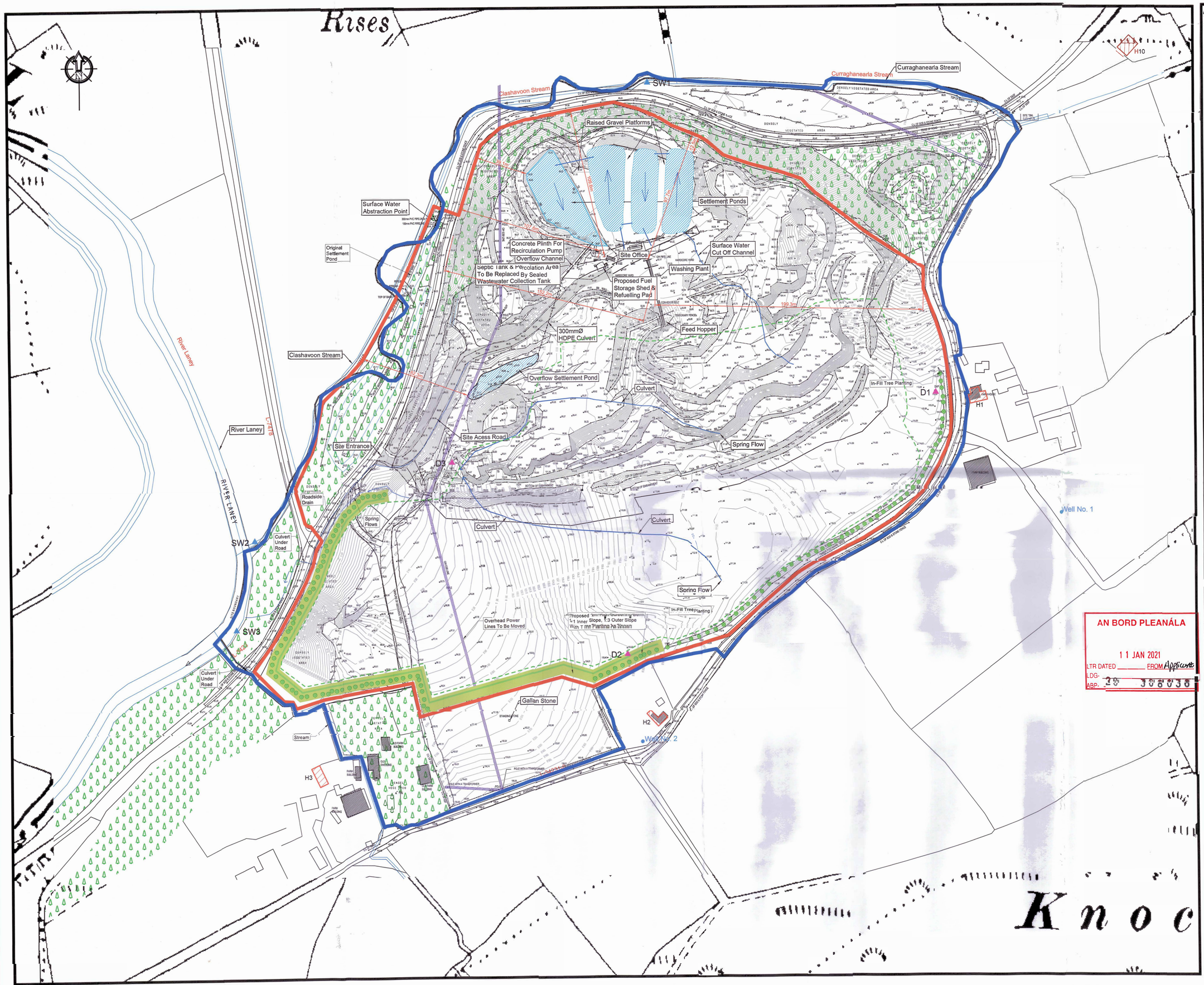

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LEGEND

- Section 37L Further Development Application
- Land Ownership Boundary
- Extraction Boundary
- Dust Monitoring Location — D1 to D3
- Surface Water Monitoring Location — SW1 to SW3

No.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

AN BORD PLEANÁLA
11 JAN 2021
LTR DATED _____ FROM Applicant
LDG- 29 308038
ABP-

Client: DRIMOLEAGUE CONCRETE WORKS Ltd.

Project: UMMERA GRAVEL PIT

Issue: Section 37L Further Development Application

Title: MONITORING POINTS LOCATION PLAN

Scales: 1:1250
A1-Printed Page Size

Prepared By	Checked	Date
DK	DK	5-Jan-21

Dwg. No.
Drawing No.8

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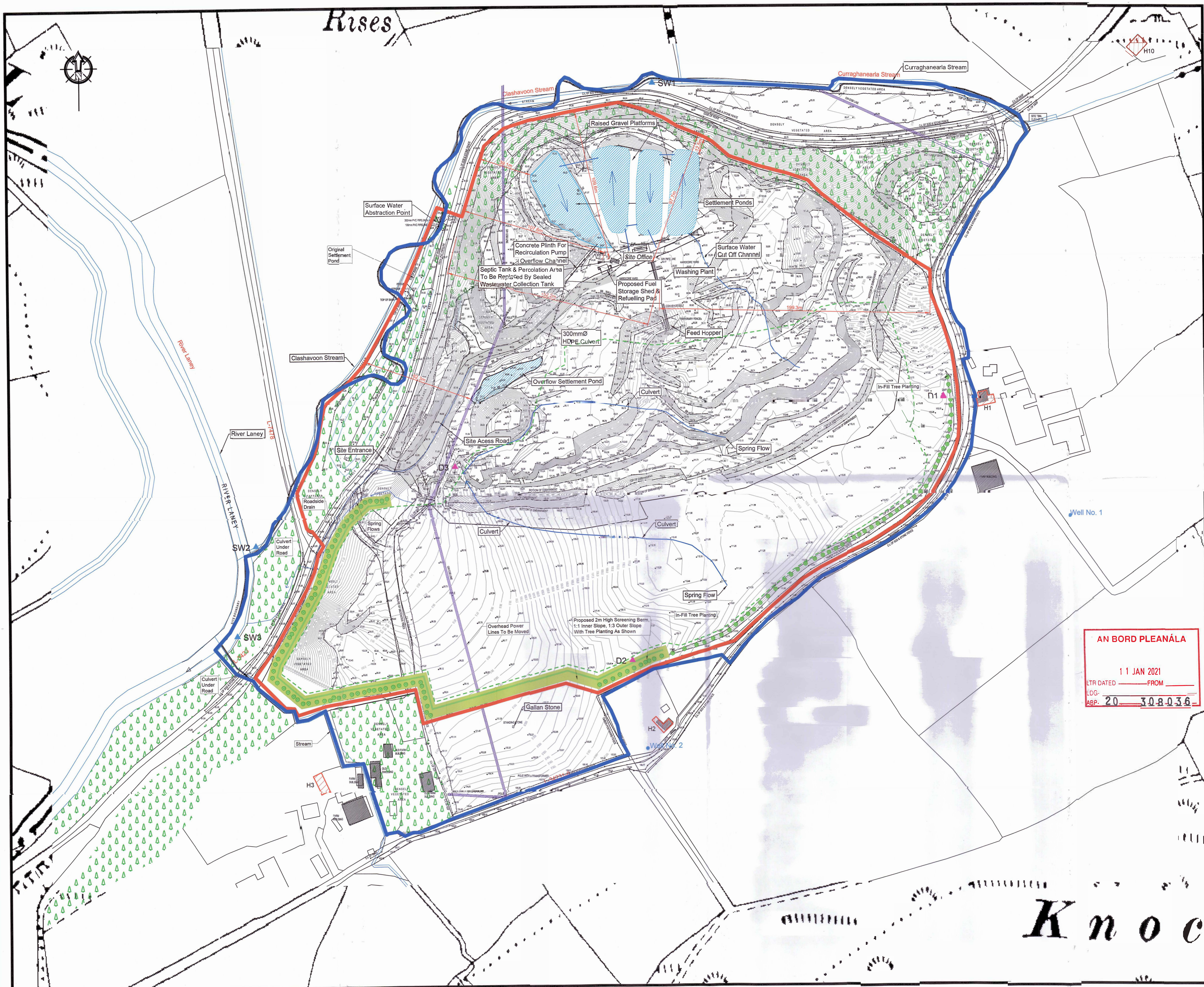

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11 JAN 2021
LTR DATED ______ FROM ______
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LEGEND

Section 37L Further Development Application	(red line)
Land Ownership Boundary	(blue line)
Extraction Boundary	(green dashed line)
Dust Monitoring Location	▲ D1 to D3
Surface Water Monitoring Location	▲ SW1 to SW3

Rev.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

Client
DRIMOLEAGUE CONCRETE WORKS Ltd.

Project
UMMERA GRAVEL PIT

Issue
Section 37L Further Development Application

Title
MONITORING POINTS LOCATION PLAN

Scales
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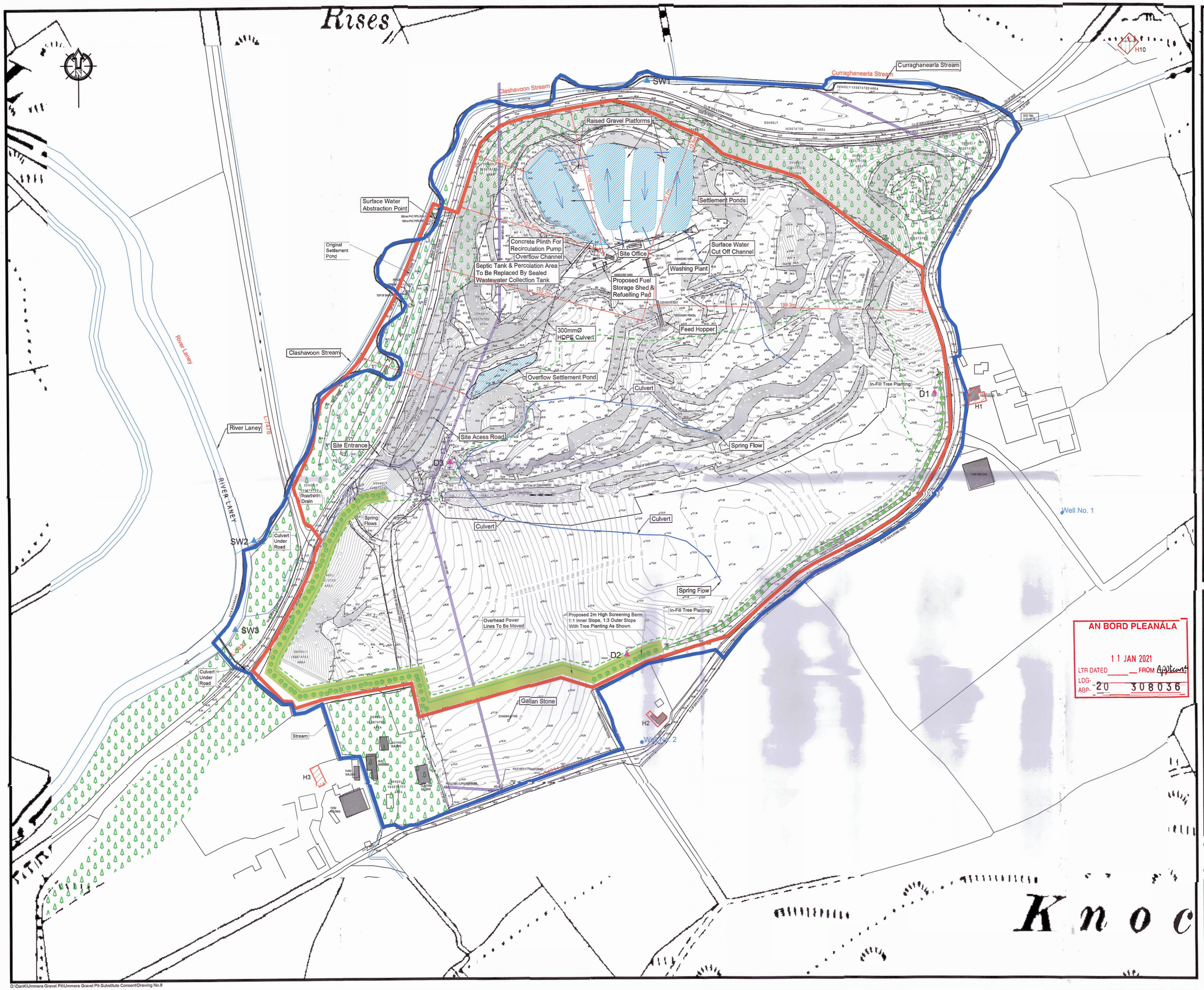

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- Section 37L Further Development Application
- Land Ownership Boundary
- Extraction Boundary
- Dust Monitoring Location — D1 to D3
- Surface Water Monitoring Location — SW1 to SW3

No.	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

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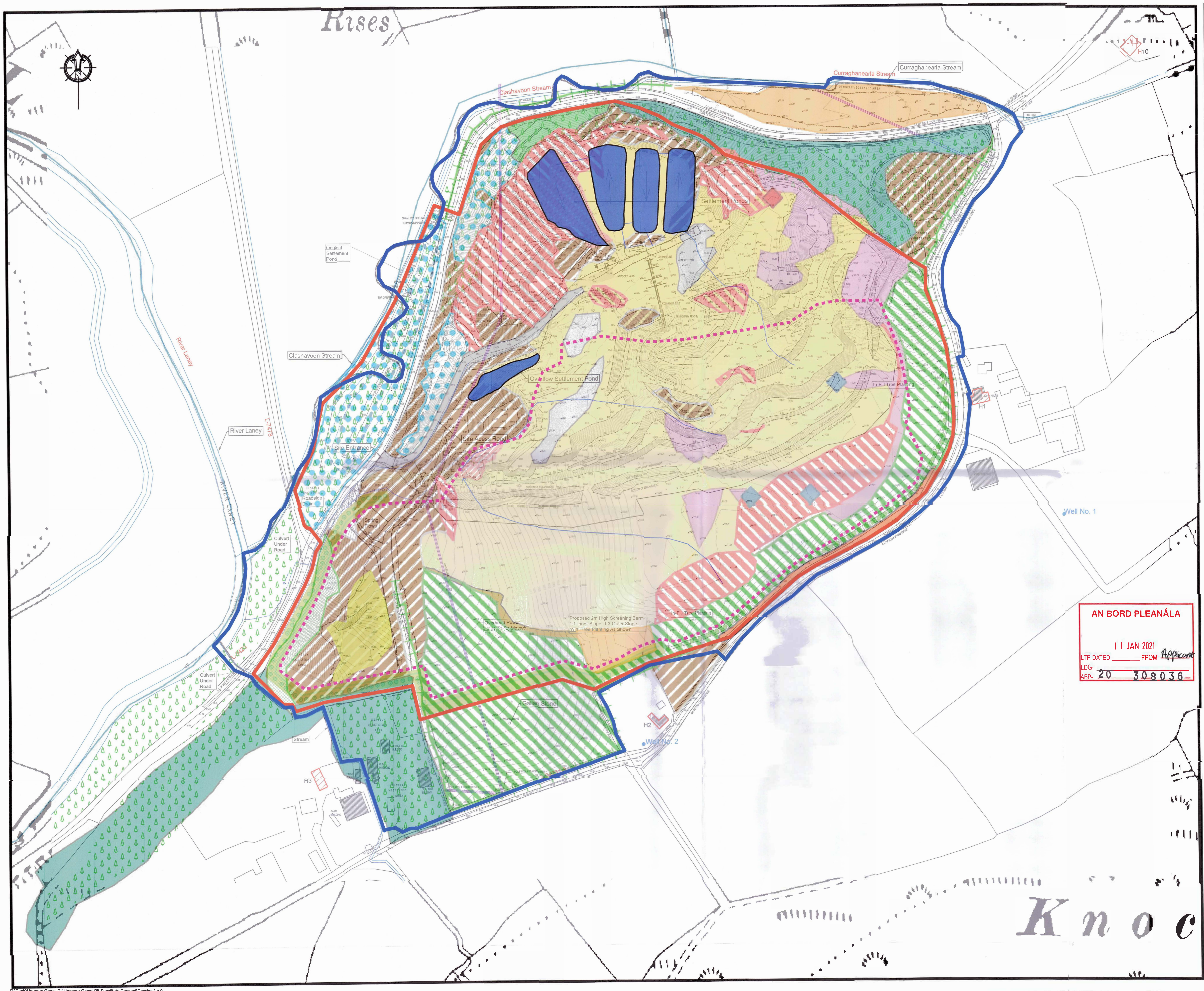

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LEGEND

- Section 37L Further Development Application
- Land Ownership Boundary
- Extraction Boundary

Habitats

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Rev	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

Client
DRIMOLEAGUE CONCRETE WORKS Ltd.

Project
UMMERA GRAVEL PIT

Issue
Section 37L Further Development Application

Title
HABITAT MAP

Scales
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Section 37L Further Development Application

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Item	Description	Date
1	Section 37L Further Development Application Further Information Submission	5-Jan-21

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11 JAN 2021
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LDG: _____
ABP: 20 308036

Client: DRIMOLEAGUE CONCRETE WORKS Ltd.

Project: UMMERA GRAVEL PIT

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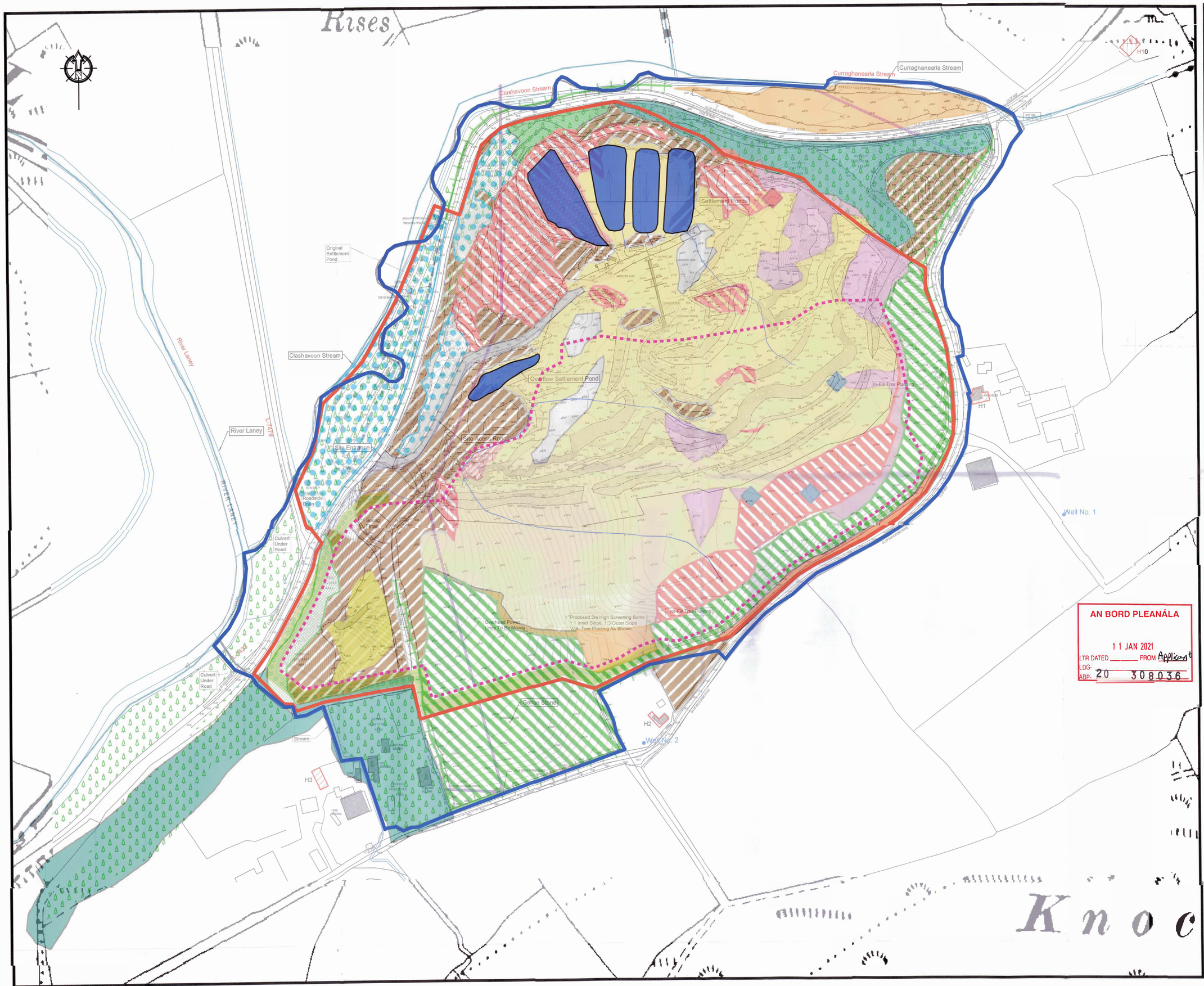

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4	Section 37L Further Development Application Further Information Submission	5-Jan-21

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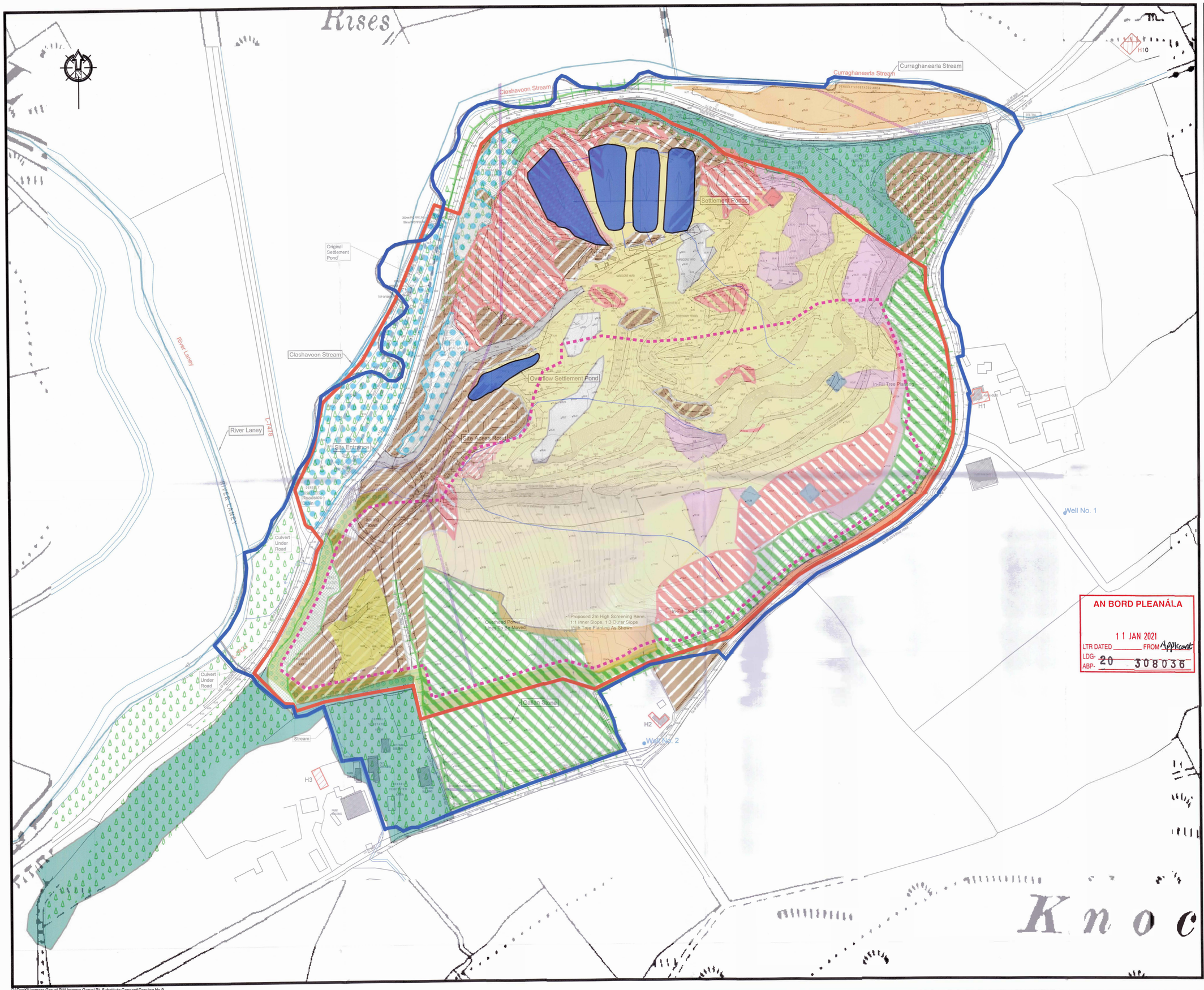

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