

## **SECTION A: NON-TECHNICAL SUMMARY**

### **ATTACHMENT A.1: Non-Technical Summary**

#### **Applicant details**

Kildare Sand & Gravel Limited, with registered offices at Hazelwood House, Prosperous, Co. Kildare, is applying to the Environmental Protection Agency (EPA) for a Waste Licence for a site at Boherkill, Rathangan, Co. Kildare.

Contact details for Kildare Sand & Gravel Limited are: telephone 045-868058, fax 045-861234.

The addressee for correspondence, on behalf of the applicant, is Mr Raphael McEvoy, RME Environmental, Drumgola House, Drumgola, Cavan, Co. Cavan (tel. 087 6390959).

#### **Planning authority**

The proposed development is situated in the functional area of Kildare County Council.

#### **Discharge to sewer**

There is no proposed discharge to sewer.

#### **Site location**

The application site (a sand and gravel quarry) is located at Boherkill, Rathangan, Co. Kildare (Irish National Grid Coordinates E269079, N216731).

#### **Nature of the facility**

The proposal is to restore a sand and gravel quarry to previous agricultural use. The proposed input is 225,000 tonnes per annum, over a 10-year lifetime (approx. 1.5 million m<sup>3</sup> total void capacity). Proposed input materials are soil and stones (for restoration works), and concrete, blocks, bricks and ceramic tile (for internal site haul roads). Any non-inert construction and demolition waste unintentionally imported to site will be separated, prior to removal off-site to authorised facilities. Temporary stockpiling of topsoil and subsoil is proposed. Continued excavation on a limited basis of residual sand and gravel. Site plant will include a bulldozer/excavator, weighbridge, wheel-wash and temporary site offices.

Proposed hours of operation/waste acceptance are between 08.00hours and 18.00hours each weekday and 08:00hours to 13:00hours on Saturday. The site will not operate at any other time.

#### **Classes of activity**

The proposed classes of activity, as per the Third and Fourth Schedules of the Waste Management Acts 1996 to 2011, are:

- R 5, Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials (Principal activity)
- R 3, Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals
- R 4, Recycling/reclamation of metals and metal compounds
- R 10, Land treatment resulting in benefit to agriculture or ecological improvement
- R 12, Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)
- R 13, Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)
- D 15, Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)

### Quantity and nature of wastes

The proposed input is 225,000 tonnes per annum, over a 10-year lifetime (approx. 1.5 million m<sup>3</sup> total void capacity). Proposed input materials are soil and stones (for restoration works), and granular fill, concrete, blocks, bricks and ceramic tile (for internal site haul roads).

It is estimated that approximately 95% of incoming materials will be recovered on site for the purpose of restoring a worked-out quarry. Any small amount of non-inert construction and demolition waste unintentionally imported to site will be separated, prior to removal off-site to authorised facilities. Wastes removed off-site will be recovered, insofar as possible.

Proposed input waste types, by EWC, are listed in **Table A.1**.

**Table A.1: Proposed EWC Codes**

EWC Code	Description
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and Ceramics
17 01 07	Mixture of concrete Bricks, tiles and Ceramics other than those mentioned in 170601
17 05 04	Soil and Stone
19 12 09	Minerals (for example sand, stones)

### Resource and energy use

Input materials for site restoration will be as described above.

Electric power, lighting and heating are provided at the temporary site office near the entrance to the application site. Mains water is available on site and can be used for any basic sanitary functions. Records of electricity and water usage will be retained.

It is not intended to provide bunded fuel storage tanks at the application site. Fuel for plant and equipment undertaking the site restoration works will be stored in double skin bowsters located on the hardstanding area. No re-fuelling of HGV trucks will take place on site. Oil and lubricant changes for wheeled or tracked plant will be undertaken on-site at the existing hardstanding area. Records of fuel usage and waste oil removal off-site will be retained.

### Plant, methods, processes, abatement, recovery and treatment systems and operating procedures

The facility will operate in accordance with a Waste Acceptance Procedure, to be agreed with the EPA.

After weigh-in, incoming materials will be tipped directly by HGV at the active restoration area (clean soil and stones), or at the recovery/inspection area (other inert materials). The critical item of plant on site will be 1 No. tracked bulldozer. It is anticipated that a JCB loader will also be employed on site. The bulldozer will 'push in' a tipped load, level it and compact it at the active restoration area.

In relation to final cover material, stockpiled or delivered subsoil and topsoil will be tipped, levelled and prepared for grassing.

Should small items of non-conforming material (e.g. timber, plastic, metal) be delivered in an incoming load, they will be picked out, by hand, and stored in skips at the recovery area, pending off-site removal to an appropriately authorised facility.

Dust will be minimised via the following methods:

- Phased restoration of the site, with final cover and grassing being applied to each completed phase, as soon as practicable.
- Use of a wheel-wash to prevent off-site movement of muck/dust onto public road network.
- Dust suppression/sprays at items of plant/activities which are dust-generating, as necessary.
- Maintenance and good housekeeping at site roads and hardstanding areas.
- Servicing and maintenance of on-site plant and equipment.
- Incoming HGV loads, which have dust-generating potential, will be covered.
- Speed restrictions for HGVs on site roads.
- Use of a bowser, as and when necessary, to reduce dust on hardstanding areas.
- Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind. The double handling of material will be

avoided where possible and drop heights will be minimised during material loading and unloading.

- As part of the facility's Environmental Management System, site staff will conduct routine site inspections, which will include checks to ensure that dust control measures are working effectively and that public roads outside the site are clean.
- Regular dust monitoring to confirm that there is no dust nuisance to neighbours from the site's activities.

A surface water collection system (to underground, double-skinned tanks) is proposed at the waste inspection/quarantine area.

Noise associated with incoming/outgoing HGVs and mobile quarry/restoration plant and machinery will be controlled as follows:

- The existing planning permission provides for up to 50 truck movements in and out of the site each day. No further increase in traffic levels, over and above this level, is envisaged in future years.
- Opening hours/waste acceptance hours will be controlled, as detailed in Attachment C.3.
- Internally within the application site, warning notices, direction signs and speed restriction signs will be established along site roads leading, which will reduce traffic speed and noise.
- Maintenance and good housekeeping at site roads and hardstanding areas.
- Acoustic screening, as necessary, including the topography of the site and existing embankments/berms.
- The use of conventional audible reversing alarms may cause problems and alternatives are available. Audible reversing warning systems on mobile plant and vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites.
- Regular and routine servicing and maintenance of plant.
- Staff training and supervision to keep site noise to a minimum. Good practice includes:
  - the proper use and maintenance of tools and equipment;
  - the positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel;
  - the avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment;
  - avoid unnecessary revving of engines and switch off equipment when not required.

#### **Section 40(4) of the Waste Management Act**

The Waste Licence Application (Attachment L.1) details how the applicant meets with the requirements of Section 40(4) of the Waste Management Act.



**Source, location, nature, composition, quantity, level and rate of emissions**

No direct emissions to atmosphere are proposed.

No emissions to surface waters are proposed.

No emissions to sewer are proposed.

No emissions to groundwater are proposed.

Noise emissions will be associated with incoming/outgoing HGVs and mobile quarry/restoration plant and machinery. The EIS concluded that, during normal operation of the facility, there should be a negligible noise impact at all nearby residents. Noise mitigation measures are outlined.

Potential fugitive dust emissions have been considered and mitigation measures are outlined.

**Existing or proposed emissions**

No other emissions (other than previous section) are deemed appropriate.

**Monitoring and sampling points**

Dust monitoring is proposed at 4 No. locations (see **Drawing 151324-WLA-10**), twice per year.

Noise monitoring is proposed at 4 No. locations (see **Drawing 151324-WLA-10**), once per year.

Groundwater monitoring is proposed at 3 No. locations (see **Drawing 151324-WLA-10**), twice per year.

**Prevention, minimisation and recovery of waste**

The proposed restoration of the quarry is regarded as a recovery operation. Suitable inert material will be used for the construction of internal haul roads.

Any non-inert waste separated from incoming loads will be recovered (off-site) insofar as practicable. Waste oils generated on site will be recovered (off-site). Office and on-site waste will be segregated for (off-site) recycling.

No hazardous waste will be accepted at the facility.

**Arrangements for the off-site treatment or disposal of wastes**

Any non-inert waste separated from incoming loads will be recovered (off-site) insofar as practicable. Waste oils generated on site will be recovered (off-site). Office and on-site waste will be segregated for (off-site) recycling.

Only registered Waste Collection Permit-holders will be engaged, who hold the relevant permissions for collections in Co. Kildare, and are permitted for appropriate EWC codes and destination facilities. In relation to off-site facilities for disposal/recovery, these facilities will be appropriately licensed/permitted by the EPA/Local Authority.

**Measures, including emergency procedures, to prevent unauthorised or unexpected emissions**

The proposed activity is deemed to be of low environmental risk. It is not intended to provide bunded fuel storage tanks at the application site. Dedicated sand piles and/or spill kit(s) will be retained on site to contain and absorb hazardous liquid material in the event of a leak or accidental spillage from plant/equipment.

The facility notice board (to be positioned at the site entrance) will include contact details, including out-of-hours contact information, for the Operator/nominated individual, who can respond to potential emergency situations. An Emergency Response Procedure will be documented and maintained as part of the facility's Environmental Management System.

**Closure, restoration, remediation or aftercare of the facility concerned**

An outline Closure, Restoration and Aftercare Management Plan (CRAMP) for the facility is presented in Attachment K. It provides details on site activities; closure tasks; restoration tasks; aftercare tasks.

The following criteria will be applied to evaluate the success of closure, restoration and aftercare:

- The site has been fully restored, in accordance with requirements of planning and licensing. Final capping and grassing have been completed and the site has been returned to agricultural grassland.
- All mobile plant and equipment, and temporary site accommodation units have been removed off-site.
- Environmental monitoring has concluded that there are no residual issues.
- Any required post-restoration infrastructure remains in place, e.g. certain monitoring points to be agreed with the Agency.
- A closure validation report has been completed by a competent person.
- The EPA licence has been surrendered.

**Financial provision**

Financial provision for site closure/environmental liabilities will be put in place by the operator to address EPA requirements.

**Major Accident Hazards Involving Dangerous Substances**

The European Communities (Control of Major Accident Hazards Involving Dangerous Substances) Regulations 2000 (S.I. No. 476 of 2000) does not apply to the proposed development.

**Emission of List I and II substances into an aquifer**

There are no emissions to groundwater. Incoming material for site restoration will be inert only. There will be no bulk fuel storage on site; fuel for plant and equipment will be stored in double-skin bowsers located on the hardstanding area.

**EIS Summary**

An EIS is submitted as part of the licence application. The likely significant effects of the activity are summarised in **Table A.2** below.

**Table A.2: EIS summary table**

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
<b>Human Beings</b>		
<ul style="list-style-type: none"> <li>Environmental factors detailed in other sections of this report</li> </ul>	<ul style="list-style-type: none"> <li>Most notably noise and air quality (including dust)</li> </ul>	<ul style="list-style-type: none"> <li>See relevant section below</li> </ul>
<ul style="list-style-type: none"> <li>The long-term impact of backfilling and restoration of the application site will be the elimination of established traffic movements using the site</li> </ul>	<ul style="list-style-type: none"> <li>Improvement of the human environment</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>The infilling of the existing void and backfilling to former ground level will remove an unsightly feature in the existing landscape and restore the area to a more pristine agricultural landform</li> </ul>	<ul style="list-style-type: none"> <li>Visual impact gain</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<b>Flora and fauna</b>		
<ul style="list-style-type: none"> <li>During the filling process the site is likely to be covered by open vegetation similar to what occurs today on the south-western side.</li> </ul>	<ul style="list-style-type: none"> <li>This will support an invertebrate fauna which will in turn allow feeding by sand martins and swallows.</li> </ul>	<ul style="list-style-type: none"> <li>Wheel-wash will be retained during the period of filling to prevent loose material being left on the public road. There will be no escape of run-off as water will accumulate internally and will drain naturally through the remaining glacial material.</li> </ul>
<ul style="list-style-type: none"> <li>Continuing extraction on the scale envisaged will not have any ecological effect on the habitat.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	
<ul style="list-style-type: none"> <li>Restoration work will eventually remove suitable banks for nesting by the sand martins (and peregrines)</li> </ul>	<ul style="list-style-type: none"> <li>However, the species are flexible and will colonise new quarries as they become available.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>The eventual restoration of the site will be to agricultural land suitable for grass or tillage crops.</li> </ul>	<ul style="list-style-type: none"> <li>Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>Restoration will include the removal of all machinery and structures and the smoothing of the contours to facilitate the establishment of grassland and grazing animals.</li> </ul>
<b>Soil</b>		
<ul style="list-style-type: none"> <li>The nature of the development has involved the removal, storage</li> </ul>	<ul style="list-style-type: none"> <li>The impact on the soils is considered to be of a temporary nature as they</li> </ul>	<ul style="list-style-type: none"> <li>The storage areas and restoration areas will be vegetated as soon as is</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
and placement of soils and subsoils.	are stored for reuse directly within the worked out areas as a fundamental part of the proposed site rehabilitation.	<p>possible, to reduce both visual impact and erosion.</p> <ul style="list-style-type: none"> <li>▪ Soil stripping will be carried out in accordance with the principles of good soil handling.</li> <li>▪ For the placement of subsoil and topsoil, the machinery will work from the haulage track or the exposed subsoil surface and away from the reinstated part of the site.</li> <li>▪ Soils will only be handled in appropriate weather conditions.</li> <li>▪ All temporary storage mounds will have slope angles not greater than 1:1.5 and will be re-vegetated as quickly as possible to avoid soil erosion by air and water.</li> <li>▪ During backfilling, all temporary surfaces will be graded to facilitate over-ground run-off of surface water.</li> </ul>
<ul style="list-style-type: none"> <li>▪ By its nature, quarrying of the underlying sand and gravel deposits will involve removal of an identified aggregate resource.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This has and will result in an <i>irreversible negative significant impact</i> on the sand and gravel resource.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>▪ As a result of backfilling using inert soils and stones, the reinstatement of the quarry will progress to land suitable for agricultural and forestry, and thus will have a <i>positive impact</i>.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The nature of the proposed restoration of the site involves the importation and placement of inert soil and stone as backfill in the quarry void.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Before waste is accepted at the site, all waste will be confirmed to meet the waste permit conditions, the waste acceptance procedures (WAP) and waste acceptance criteria.</li> <li>▪ Visually inspection of all tipped loads.</li> <li>▪ All waste tonnages will be recorded and reported to EPA annually.</li> <li>▪ Monitoring of groundwater should commence for the duration of the restoration</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
		works and for a short aftercare period.
<ul style="list-style-type: none"> <li>▪ The available site investigation data indicates that the area to be backfilled is underlain by relatively competent sand and gravel strata. The increase in loading applied to these soils (below existing formation level) will not exceed that which existed prior to extraction of sand and gravel.</li> <li>▪ Restoration of the quarry will have no indirect impact on the local or regional geology, as placement of the inert soil and stone will not instigate slope instability, release contaminants onto the lands and dust from the restoration will be tightly controlled.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As a consequence, no deep seated failure of temporary slopes is anticipated.</li> <li>▪ In the longer-term, there will be no risk of instability as the restored site will be graded to a relatively flat, shallow slope.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Slope stability assessments on an annual basis.</li> <li>▪ Temporary slopes in backfilled soils will be graded at an angle no steeper than 350, sufficient to ensure no instability arises.</li> <li>▪ The area of bare or exposed soils will, insofar as practicable, be kept to a minimum. Consideration could be given to establishing temporary vegetation cover.</li> </ul>
<ul style="list-style-type: none"> <li>▪ The final land restoration scheme will ultimately allow the site to be returned to a condition whereby there will be negligible residual impact on the surrounding environment following the removal of sand and gravel within the pit.</li> </ul>	<ul style="list-style-type: none"> <li>▪ It is planned to minimise, eliminate or decrease long-term ecological and visual impacts on the environment through the implementation of the final restoration scheme.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In order to maximise the future agricultural potential of the restored land, a minimum 150 mm thick layer of topsoil and 850 mm thick layer of subsoil will be placed over the backfilled clayey mineral soils. The final landform will also be graded so as to facilitate over-ground run-off of surface water and avoid ponding of surface water in closed depressions.</li> </ul>
<b>Water</b>		
<ul style="list-style-type: none"> <li>▪ There are no surface water bodies on-site or within the vicinity of the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>▪ Infilling former high permeability material with low permeability inert fill material could create a low permeability zone altering groundwater recharge.</li> <li>▪ Possible groundwater mounding/flooding could occur if the fill acts as a barrier to normal groundwater flow patterns.</li> </ul>	<ul style="list-style-type: none"> <li>▪ However, this is thought unlikely as the groundwater table appears deep in the vicinity of the site and the site has been worked dry to date. In the event of any mounding since the permeability of the surrounding subsoil is</li> </ul>	<ul style="list-style-type: none"> <li>▪ Only suitably permeable and inert material will be used in the restoration, thereby reducing the potential to create a low permeability zone which could hinder local/ regional groundwater recharge and/or creating an</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
	<p>mapped as high it is anticipated that recharge will flow freely around the restored site and it is unlikely to cause significant mounding/flooding.</p>	<p>impermeable barrier to groundwater recharge.</p> <ul style="list-style-type: none"> <li>▪ The settlement lagoon will be dredged to allow it to operate without overflowing to the natural sump at the northern boundary of the site. Regular dredging will maintain the functional operation of the lagoon.</li> </ul>
<ul style="list-style-type: none"> <li>▪ The importation of soils and material can influence the chemical composition of underlying groundwater. This is primarily through potential changes to the pH - e.g. by importing base-rich mineral soil to a primarily acidic catchment.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Any alteration of the chemical composition as a result of improper placement of soil would result in a direct negative short-term moderate impact on the underlying groundwater. This is unlikely to occur however as imported material will be from the Kildare hinterland and is likely to be similar in composition to the existing soil.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Strict control measures to ensure only suitable material is allowed onto the site.</li> <li>▪ It is proposed that groundwater monitoring be carried out biannually.</li> <li>▪ Any slurry spreading and/or organic fertiliser spreading on the restored agricultural ground will adhere strictly to the Good Agricultural Regulations S.I. No. 31 of 2014. Appropriate buffer zones will be maintained from watercourses.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Possible contamination of soil and subsoil, by leakage or spillage from machinery and associated equipment, may occur during the construction phase.</li> <li>▪ Possible contamination of bedrock, by leakage or spillage from machinery and associated equipment, may occur during the construction phases.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Any accidental hydrocarbon spillage would have a negative short-medium term moderate impact on groundwater quality at the site.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Containment of site fuels and oils</li> <li>▪ Traffic management system and site speed limit to risk of a collision</li> <li>▪ Refuelling of vehicles would either be undertaken in a surfaced compound area from a fuel tank(s) that is bunded or be undertaken off-site</li> <li>▪ A double-skinned mobile fuel bowser is used to refuel plant and machinery. Spill trays and spill kits will be provided at all times;</li> <li>▪ Maintenance of plant and machinery would be undertaken within a site compound area or offsite</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
		<ul style="list-style-type: none"> <li>▪ High absorbency mats, pig tails and drums are to be added/ maintained in the stock-piling areas of the site and in quarry vehicles</li> </ul>
<ul style="list-style-type: none"> <li>▪ Any removal of soils will temporarily increase the groundwater vulnerability during construction.</li> </ul>	<ul style="list-style-type: none"> <li>▪ This would have a negative short-term moderate impact on the groundwater.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>▪ It is not expected that bedrock will be exposed during the majority of the development works. Any soil excavations that expose the underlying bedrock to the atmosphere can result in weathering of the bedrock, which is considered to be a slight negative long-term moderate impact.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Any soil excavations that expose the underlying bedrock to the atmosphere can result in weathering of the bedrock, which is considered to be a slight negative long-term moderate impact.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>
<ul style="list-style-type: none"> <li>▪ The available site investigation data indicates that the area to be backfilled is underlain by relatively competent sand and gravel strata. The increase in loading applied to these soils (below existing formation level) will not exceed that which existed prior to extraction of sand and gravel.</li> </ul>	<ul style="list-style-type: none"> <li>▪ As a consequence, no deep seated failure of temporary slopes is anticipated.</li> <li>▪ In the longer-term, there will be no risk of instability as the restored site will be graded to a relatively flat, shallow slope.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Temporary slopes in backfilled soils (above formation level) will be graded at an angle no steeper than 35°, sufficient to ensure no instability arises.</li> <li>▪ It is envisaged that a stability assessment of side slopes at the application site will be undertaken on an annual basis.</li> </ul>
<b>Air</b>		
<ul style="list-style-type: none"> <li>▪ Construction activities such as excavation, earth moving and backfilling can generate dust, particularly in dry weather conditions.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The extent of dust generation is dependent on the nature of the material (soils, peat, sands, gravels, silts etc.) and the location of the construction activity. In addition, the potential for dust dispersion depends on the local meteorological factors</li> </ul>	<ul style="list-style-type: none"> <li>▪ Site roads shall be regularly cleaned and maintained as appropriate.</li> <li>▪ Hard surface roads shall be swept to remove mud and aggregate materials</li> <li>▪ Any road that has the potential to give rise to fugitive dust may be regularly watered, as appropriate, during extended dry and/or windy conditions.</li> <li>▪ Speed restrictions (20 km per hour)</li> </ul>



Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
	<p style="color: red; text-align: center; font-style: italic;">For inspection purposes only. Consent of copyright owner required for any other use.</p>	<ul style="list-style-type: none"> <li>▪ Any vehicles exiting the site shall make use of a wheel-wash facility.</li> <li>▪ Public roads outside the site shall be regularly inspected for cleanliness and cleaned as necessary.</li> <li>▪ Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind.</li> <li>▪ Water misting or sprays shall be used as.</li> <li>▪ Diesel engines or plant machinery and trucks shall be properly maintained.</li> <li>▪ Construction Environmental Management Plan (CEMP) in order to minimise emissions as a result of the construction phase.</li> <li>▪ The dust management plan will be reviewed at regular intervals.</li> <li>▪ Controlled material deposition and maintenance of adequate moisture content in the deposited material.</li> <li>▪ The use of agricultural spray irrigation on exposed areas of quarry as required.</li> <li>▪ The rapid establishment of vegetation on the surface of non-operational and completed parts of the facility.</li> <li>▪ The current programme of dust monitoring around the quarry will be continued.</li> </ul>
<ul style="list-style-type: none"> <li>▪ Emissions associated with construction traffic can impact on local air quality.</li> <li>▪ Impacts on air quality associated with traffic during the operational</li> </ul>	<ul style="list-style-type: none"> <li>▪ For each named pollutant, emissions will remain well within the air quality limits for the</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
<p>stages - there is no significant increase in the air quality impact of named pollutants as a result of increased baseline traffic numbers in 2017, 2022 and 2027 with only a slight increase occurring in pollutant concentration predicted 5m from the road centreline.</p>	<p>protection of human health</p>	
<b>Climate</b>		
<ul style="list-style-type: none"> <li>▪ Emissions of Oxides of nitrogen, Sulphur dioxide, Carbon monoxide and Carbon dioxide will be mitigated by using efficient construction vehicles, appropriate scheduling of construction activities to minimise duration, the shutting off of equipment during periods of inactivity if they do occur, and a transport management plan as part of the CEMP as described above.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ No additional mitigation measures are considered necessary (see 'Air' above).</li> </ul>
<b>Landscape</b>		
<ul style="list-style-type: none"> <li>▪ The restoration works, and backfilling activities in particular, are expected to have only limited temporary visual impact. The phasing of the restoration scheme will minimise the area being actively restored and open to public view at any time.</li> <li>▪ There will be no significant visibility of the existing or future landform from any of the viewpoints identified by the County Development Plan.</li> <li>▪ The restoration scheme will not have any significant impacts on designated scenic roads and viewpoints, or on designated tourism routes and viewpoints.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Potential views from residences into the application site are and will be restricted to a small number of local dwellings.</li> <li>▪ The impact on views from residences, if any, will constitute a minor to moderate negative impact for a limited duration during the restoration phase. In the longer term, the restoration of the site is likely to have a minor positive impact.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Retain all hedgerows along the site boundary and reinforce with additional planting where necessary.</li> <li>▪ Provide for off-site removal, re-use and/or recovery of all buildings, plant, infrastructure and paved surfaces on completion of restoration activities;</li> <li>▪ Ensure the final restored landform is graded at a shallow angle so as to merge in with the surrounding agricultural landscape.</li> </ul>
<b>Material Assets</b>		
<ul style="list-style-type: none"> <li>▪ As the application site has functioned as a sand and gravel quarry for more than 15 years, there are likely to be few additional short-term impacts</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ Warning notices, speed restriction signs and construction traffic signposting which is established will be reviewed along the existing local road</li> </ul>

Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
arising from its continued operation.		network to direct traffic to the proposed facility.
<ul style="list-style-type: none"> <li>▪ The backfilling activities at the site, present a number of risks to groundwater including fuel spillage, increases in suspended solids in run-off and placement of a rogue load of contaminated soils. Overall, these risks are likely to constitute a minor to moderate negative impact.</li> </ul>	<ul style="list-style-type: none"> <li>▪ In the long-term, backfilling of existing temporary groundwater ponds will increase protection to, and reduce the vulnerability of, the existing groundwater aquifer.</li> </ul>	<ul style="list-style-type: none"> <li>▪ See Water section above</li> </ul>
<ul style="list-style-type: none"> <li>▪ There may be some short-term impacts at residences proximate to the site with the most noticeable short term impacts will be increased ambient noise and dust levels.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ See Air and Noise sections above</li> </ul>
<ul style="list-style-type: none"> <li>▪ No impacts are anticipated on established activities or housing nearby, commercial operations, local tourism, nor The Curragh Racecourse.</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>	<ul style="list-style-type: none"> <li>▪ Not applicable</li> </ul>
<b>Cultural Heritage</b>		
<ul style="list-style-type: none"> <li>▪ There are two sites of archaeological interest/potential, both listed as a Recorded Monuments. It is considered that the reinstatement and restoration of the quarry will have a positive impact visual impact on SITE CH-1, as the temporary visual impact on the site, caused by the existing nature of the quarry pit, will be removed.</li> <li>▪ Works associated with the removal of the silt pond bund adjacent the north-western corner of SITE CH-1 could potentially result in damage to fosse, particularly by soil run-off into the feature.</li> </ul>	<ul style="list-style-type: none"> <li>▪ However, with the adoption and implementation of a specific mitigation strategy, it is considered that such moderate impact can be totally negated. Likewise, possible use of the buffer area for machinery access could cause a similar impact on SITE CH-1 but this too can be negated by the adoption and implementation of a mitigation measure.</li> </ul>	<ul style="list-style-type: none"> <li>▪ The existing buffer area between the western edge of the quarry pit and the eastern edge of the Moated Site (Site CH-1) shall be maintained during all reinstatement works. This should be marked by a series of temporary timber stakes. No construction of other vehicles should enter this area during the course of the subject reinstatement works, save for the works associated with Item 2 below.</li> <li>▪ Removal of the silt-pond bund should be undertaken under supervision of an archaeologist. Care should be taken to avoid soil run-off into the fosse of the Moated Site (SITE CH-1). In the event that such occurs then to should be removed by hand under</li> </ul>


Likely effects identified	Brief description of effect	Mitigation measures proposed to control effect
		archaeological supervision, ensuring that the present grass surface of the monument is not disturbed.

**Non-technical summary drawings**

The following drawings are attached for the purpose of the non-technical summary (NTS):

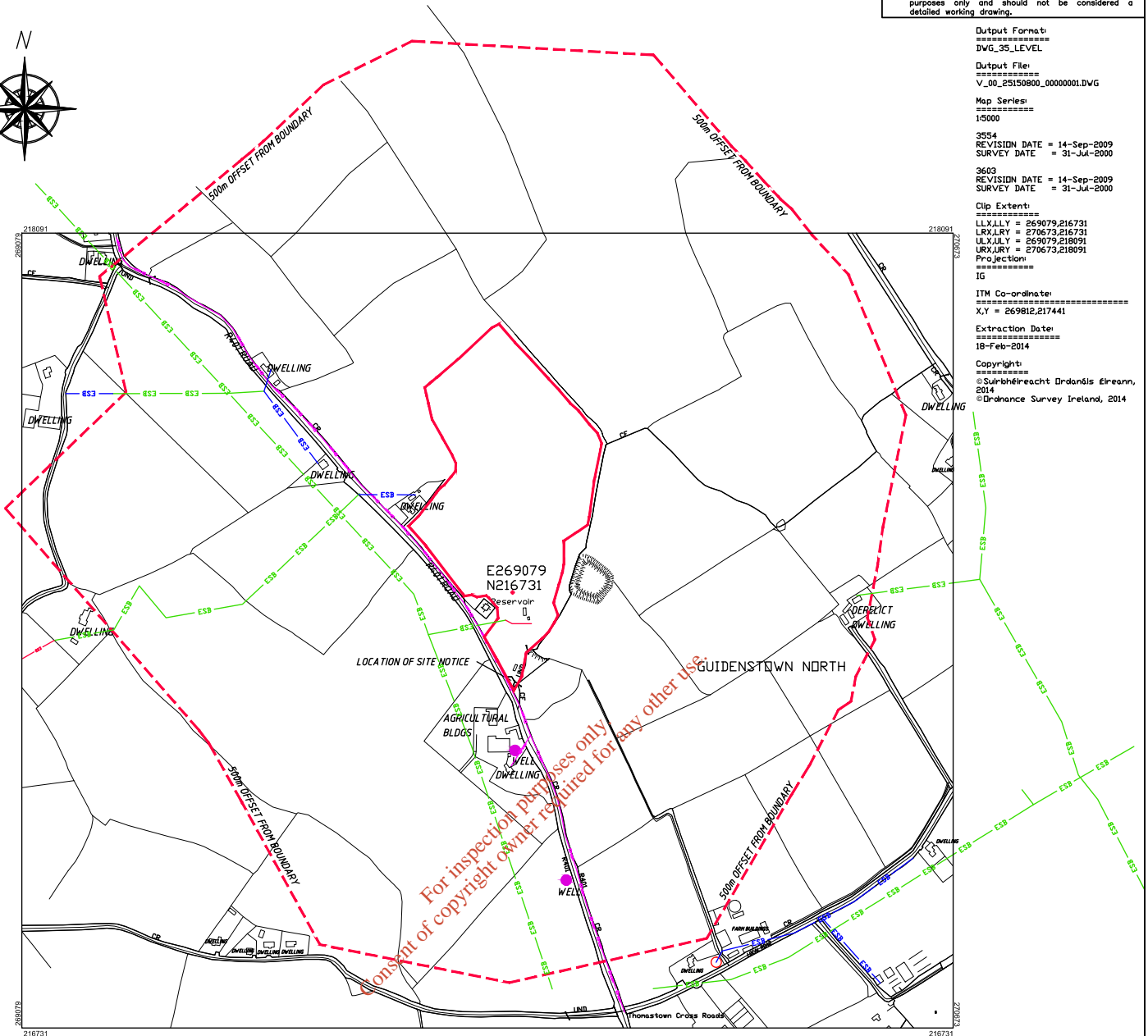
- 151324-WLA-01 Site Location Map
- 151324-WLA-03 Site Plan
- 151324-WLA-06 Phasing Plan
- 151324-WLA-07 Proposed Restoration Plan
- 151324-WLA-10 Monitoring Locations

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<p><i>Attached overleaf:</i></p> <ul style="list-style-type: none"> <li>▪ NTS drawings</li> </ul>	
---	---

NOTES:  
This drawing is for Waste Licence Application purposes only and should not be considered a detailed working drawing.

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Projection:  
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ITM Co-ordinate:  
===== X,Y = 269812,217441  
Extraction Date:  
===== 18-Feb-2014  
Copyright:  
===== ©SubhÉireacht Órdánáís Éireann, 2014  
©Ordnance Survey Ireland, 2014



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# Site Plan

- Restoration Site Boundary incl Area of Overburden Storage
- Overhead Eircom Lines
- ESB COLOUR CODE:**
- ESB BLACK - 38KV & HIGHER VOLTAGE OVERHEAD LINES
- ESB GREEN - MV(10KV/20KV) OVERHEAD LINES
- ESB BLUE - LV (400V/230V) OVERHEAD LINES
- ESB CYAN - 38KV & HIGHER VOLTAGE UNDERGROUND CABLE ROUTES
- ESB RED - MV/LV (10KV/20KV/400V/230V) UNDERGROUND CABLE ROUTES

**WARNING**

**ESB**  
THIS MAP INDICATES THE APPROXIMATE LOCATION OF ESB TRANSMISSION (400KV, 220KV, 110KV, 38KV) AND DISTRIBUTION (20KV, 10KV, 230V/400V) UNDERGROUND CABLES AND OVERHEAD LINES IN THE GENERAL AREA OF THE PROPOSED WORKS. ESB NETWORKS TAKES NO RESPONSIBILITY FOR THE ACCURACY OR COMPLETENESS OF THE MAP. IT IS THE USER'S RESPONSIBILITY TO INDEPENDENTLY VERIFY THE INFORMATION AND THE LOCATION OF UNDERGROUND CABLES AND OVERHEAD LINES. LOW VOLTAGE (230V/400V) SERVICE CABLES (E.G. HOUSE SERVICES, FACTORY/SHOP SERVICES, PUBLIC LIGHTING LAMP SERVICES, ETC) ARE NOT INCLUDED BUT THEIR PRESENCE SHOULD BE ANTICIPATED. THE DEPTHS OF UNDERGROUND CABLES MUST NEVER BE ASSUMED. ADDITIONAL MORE DETAILED INFORMATION IS AVAILABLE FOR HIGH VOLTAGE TRANSMISSION UNDERGROUND CABLES (38KV, 110KV, 220KV, 400KV) FROM THE LOCAL ESB NETWORKS TRANSMISSION REPRESENTATIVE - SEE ATTACHED LIST FOR CONTACT DETAILS OR CALL 1850 372 757. NO WORK SHOULD BE CARRIED OUT IN THE VICINITY OF 38KV OR HIGHER VOLTAGE UNDERGROUND CABLES WITHOUT PRIOR CONSULTATION WITH ESB NETWORKS. BEFORE ANY MECHANICAL EXCAVATION IS UNDERTAKEN, THE ACTUAL LOCATION OF ALL UNDERGROUND ELECTRICITY CABLES MUST BE ESTABLISHED AND VERIFIED ON THE SITE USING: (A) UP-TO-DATE MAP RECORDS; (B) CABLE LOCATER EQUIPMENT OPERATED IN BOTH POWER AND RADIO MODES; (C) CAREFUL HAND DIGGING OF TRIAL HOLES USING 'SAFE DIGGING PRACTICE'. REFER ALSO TO 'HSA CODE OF PRACTICE FOR AVOIDING DANGER FROM UNDERGROUND SERVICES'. ESB TAKES NO RESPONSIBILITY FOR AND SHALL BEAR NO LIABILITY, HOWSOEVER ARISING, IN RELATION TO ANY DAMAGE, INJURY/DEATH OR LOSS OF SUPPLY AS A RESULT OF DAMAGE OR INTERFERENCE WITH ITS NETWORKS.

**EIRCOM**  
THE INFORMATION GIVEN IS COMPILED FROM RECORDS AND IS BELIEVED TO BE CORRECT. THERE MAY, HOWEVER, BE DEPARTURES FROM THE COURSE(S) AND DEPTH(S) SHOWN OR INDICATED. THERE MAY ALSO BE ITEMS OF eircom PLANT OF WHICH NO RECORDS IN HELD. THE INFORMATION IS GIVEN WITHOUT PREJUDICE TO THE LEGAL RIGHTS OF eircom LTD. TO COMPENSATION SHOULD eircom PLANT BE DAMAGED.



## Kildare Architects & Design Ltd

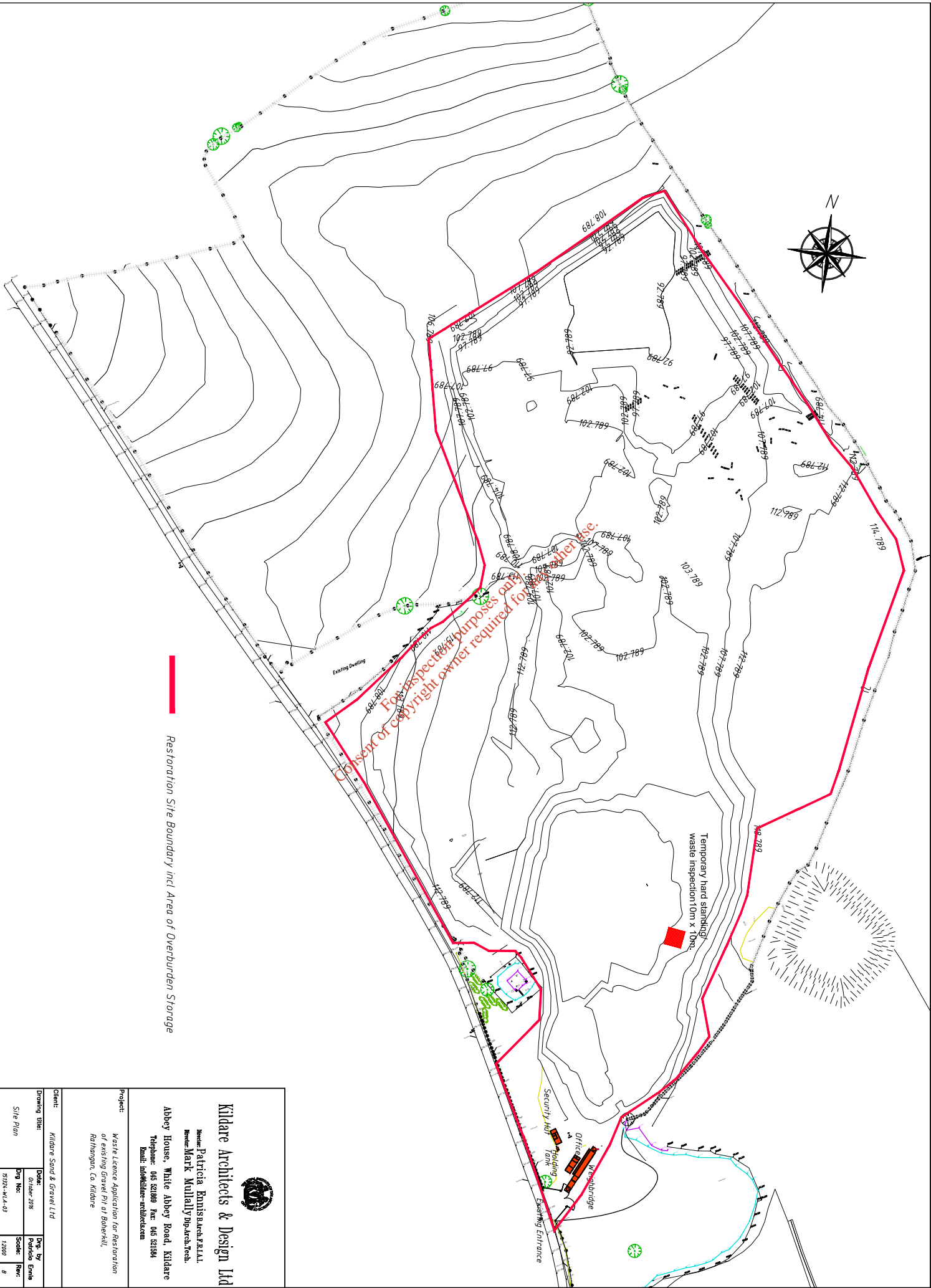
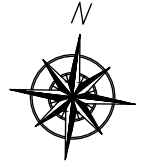
Director: Patricia Ennis B.Arch.F.R.I.A.I.  
Director: Mark Mullally Dip.Arch.Tech.

Abbey House, White Abbey Road, Kildare  
Telephone: 045 521809 Fax: 045 521584  
Email: info@kildare-architects.com

Project: Waste Licence Application for Restoration of existing Gravel Pit at Boherkill, Rathangan, Co. Kildare

Client: Kildare Sand & Gravel Ltd

Drawing title:	Date:	Dr. by
Site Location Map	October 2016	Patricia Ennis
	Dr. No:	Scale:
	151324-WLA-01	1:7500
	Rev:	
	c	



Restoration Site Boundary incl Area of Overburden Storage



**Kildare Architects & Design Ltd**

Director: Patricia Emissaran-Frill  
 Director: Mark Mullally  
 Email: info@kildare-architects.com

Abbey House, White Abbey Road, Kildare  
 Telephone: 045 821888 Fax: 045 831894

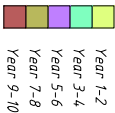
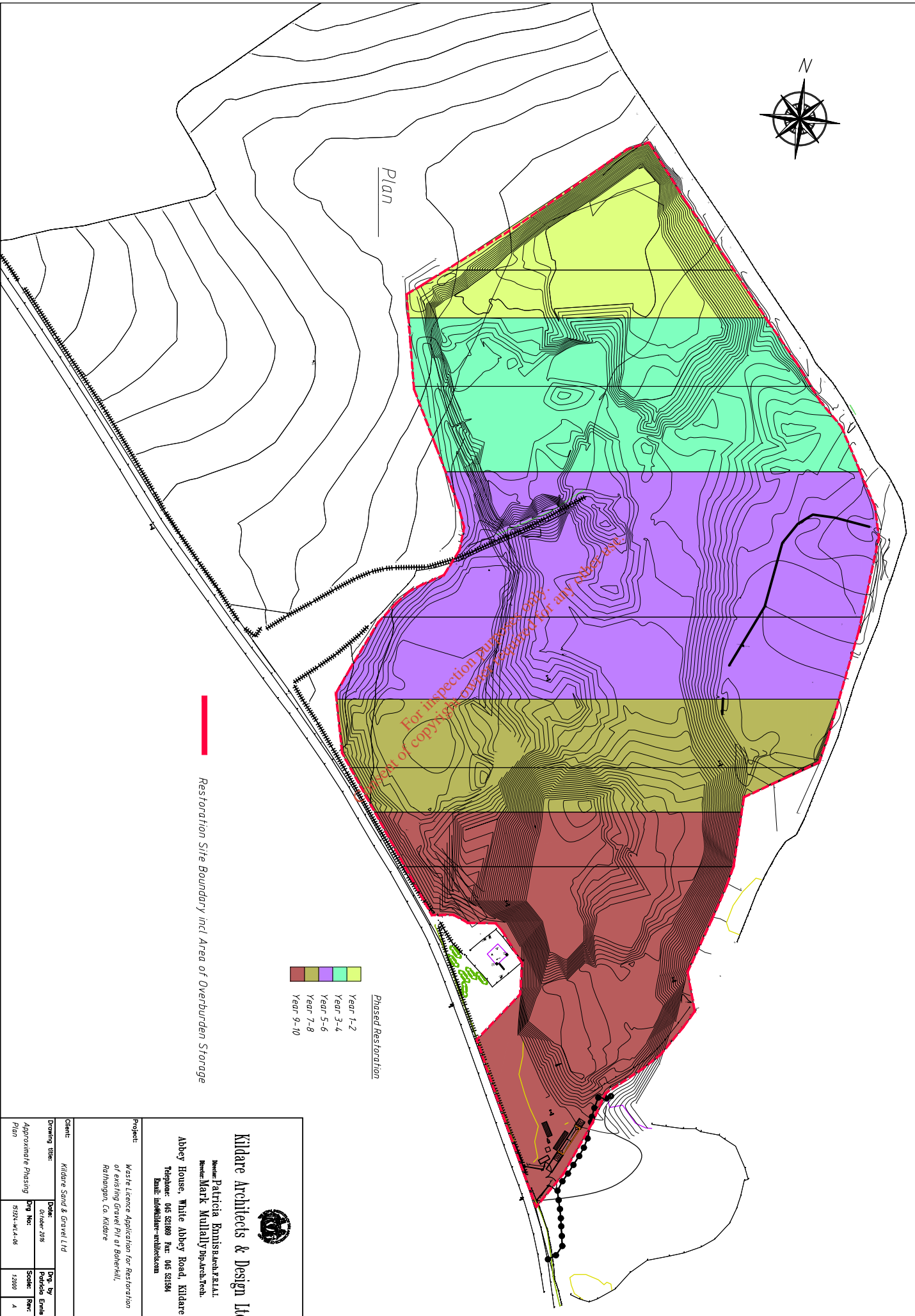
**Project:** Waste Licence Application for Restoration of existing gravel Pit at Borehill, Rathangan, Co. Kildare

<b>Client:</b>	Kildare Sand & Gravel Ltd		
<b>Drawing title:</b>	<b>Date:</b>	<b>Drawn by:</b>	<b>Checked by:</b>
Site Plan	October 2016	Patricia Emissaran-Frill	Patricia Emissaran-Frill
	<b>Dwg No:</b>	<b>Scale:</b>	<b>Rev:</b>
	5924-W4-03	1:2000	B






Plan

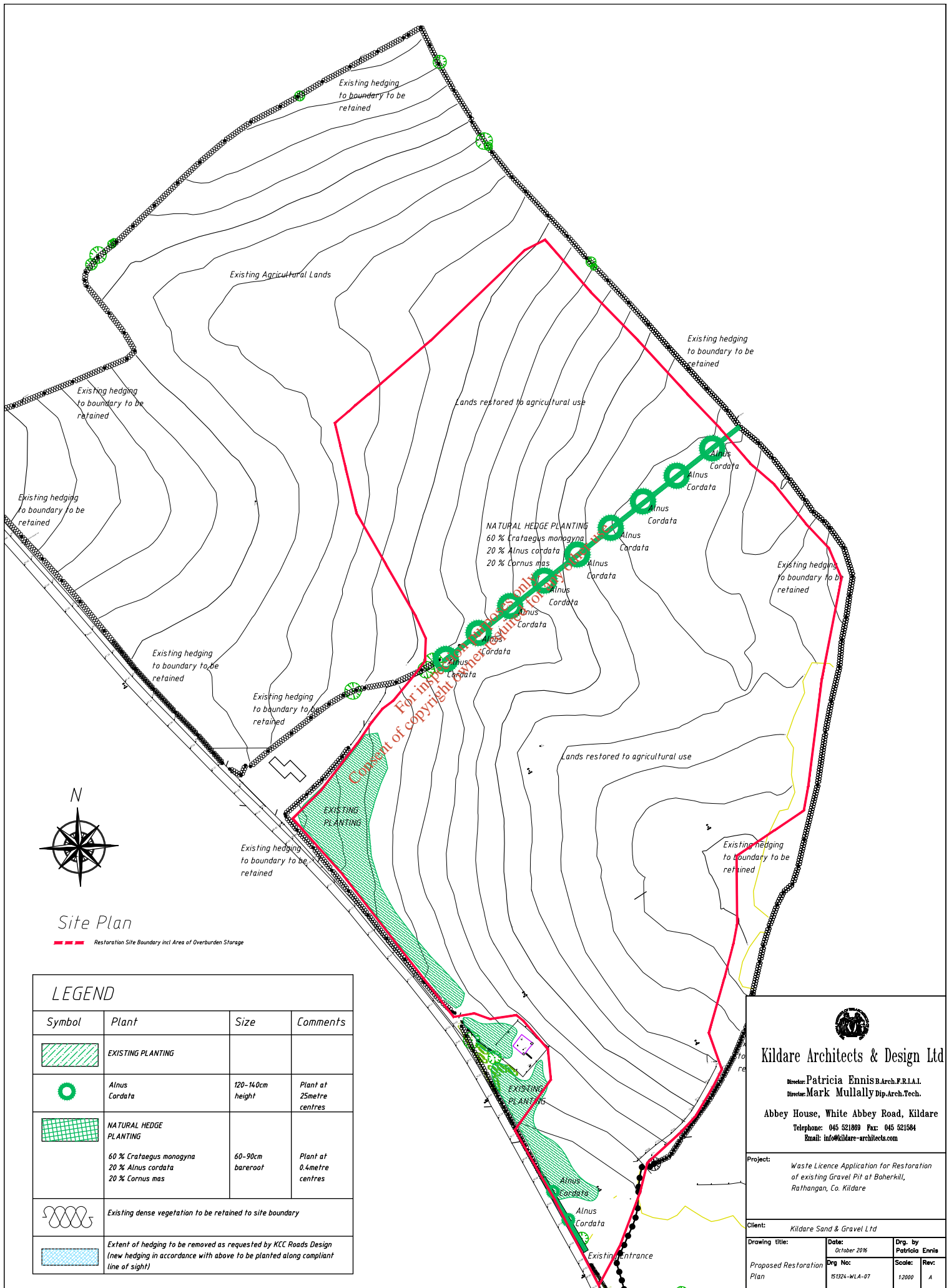


Phased Restoration

Restoration Site Boundary incl Area of Overburden Storage

	
<b>Kildare Architects &amp; Design Ltd</b>	
Incorporated in Ireland Registered with the Companies Registration Office Registered Office: Mark Mullally Design Centre, Abbey House, White Abbey Road, Kildare	
Telephone: 045 821889 Fax: 045 821894 Email: info@kildare-architects.com	
<b>Client:</b> Kildare Sand & Gravel Ltd	<b>Prepared by:</b> Patricia Emilia
<b>Drawing title:</b> Waste Licence Application for Restoration of existing gravel Pit at Bohenhill, Rahmangan, Co. Kildare	<b>Date:</b> October 2016
<b>Project:</b> Waste Licence Application for Restoration of existing gravel Pit at Bohenhill, Rahmangan, Co. Kildare	<b>App. No.:</b> W4-4-06
<b>Scale:</b> 1:2000	<b>Rev:</b> A






Site Plan

--- Restoration Site Boundary incl Area of Overburden Storage

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LEGEND			
Symbol	Plant	Size	Comments
	EXISTING PLANTING		
	<i>Alnus Cordata</i>	120-140cm height	Plant at 25metre centres
	NATURAL HEDGE PLANTING 60 % <i>Crataegus monogyna</i> 20 % <i>Alnus cordata</i> 20 % <i>Cornus mas</i>	60-90cm bareroot	Plant at 0.4metre centres
	Existing dense vegetation to be retained to site boundary		
	Extent of hedging to be removed as requested by KCC Roads Design (new hedging in accordance with above to be planted along compliant line of sight)		



**Kildare Architects & Design Ltd**

Director: Patricia Ennis B.Arch.F.R.I.A.I.  
Director: Mark Mullally Dip.Arch.Tech.

Abbey House, White Abbey Road, Kildare  
Telephone: 045 521869 Fax: 045 521584  
Email: info@kildare-architects.com

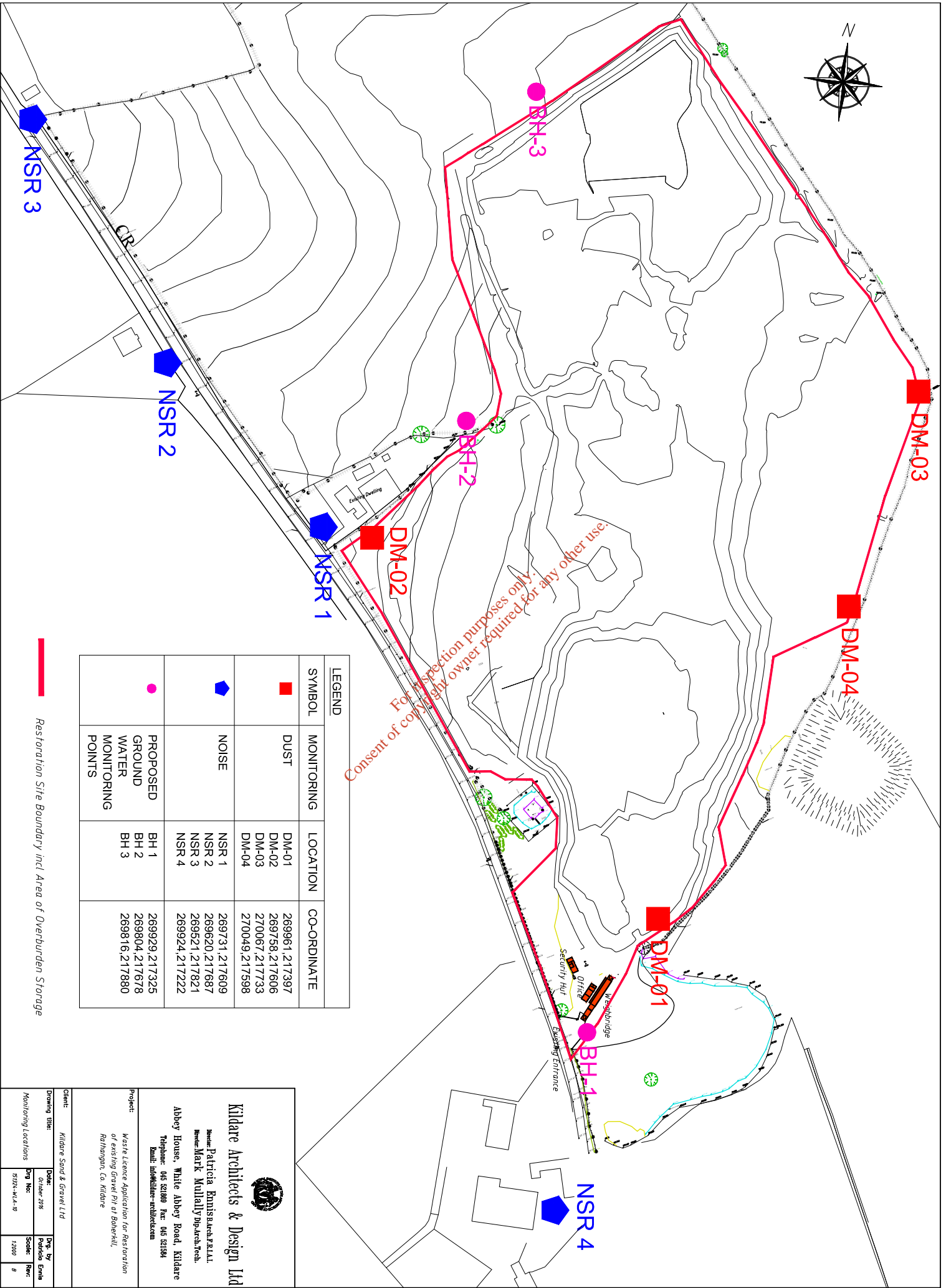
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Project: Waste Licence Application for Restoration of existing Gravel Pit at Boherhill, Rathangan, Co. Kildare

---

Client: Kildare Sand & Gravel Ltd

Drawing title: Proposed Restoration Plan	Date: October 2016	Dr. by: Patricia Ennis
Dr. No: 151324-WLA-07	Scale: 1:2000	Rev: A



LEGEND			
SYMBOL	MONITORING	LOCATION	CO-ORDINATE
■	DUST	DM-01 DM-02 DM-03 DM-04	269961,217397 269758,217606 270067,217733 270049,217598
●	NOISE	NSR 1 NSR 2 NSR 3 NSR 4	269731,217609 269620,217687 269621,217821 269924,217222
●	PROPOSED GROUND WATER MONITORING POINTS	BH 1 BH 2 BH 3	269929,217325 269804,217678 269816,217880

Restoration Site Boundary incl. Area of Overburden Storage

**Kildare Architects & Design Ltd**  
 James Patricia Eamaisbaca F.R.I.A.I.  
 Michael Mark Mullally Dip.Arch.Tech.  
 Abbey House, White Abbey Road, Kildare  
 Telephone: 045 821889 Fax: 045 83184  
 Email: info@kildare-architects.com

Project: Waste Licence Application for Restoration of Existing Gravel Pit at Bohernabreena, Kildare

Client: Kildare Sand & Gravel Ltd

Drawing title: October 2016

Monitoring Locations: 5924-W4-0

Drawn by: Patricia Eamaisbaca	Date: October 2016
Scale: 1:2000	Page: 8

**SECTION B: GENERAL**

**ATTACHMENT B.1: Applicant Details**

A certified copy of the company's Certificate of Incorporation is attached overleaf.


The company's registration number is 303089.

The company directors are: Thomas J Graham, Hazelwood House, Prosperous, Naas Co Kildare and Christopher O'Neill, Moyglare House, Ballycannon, Kilcock, Co Kildare.

The applicant for the purpose of this application to the EPA for a Waste Licence is Kildare Sand & Gravel Limited. The site is owned by Mr. Michael Ennis, Boherkill, Rathangan, Co. Kildare. The site (a quarry) has been operated by Kildare Sand & Gravel Limited for over 13 years. Kildare Sand & Gravel Limited will operate and manage the EPA Waste Licence. All on-site plant, equipment and temporary site buildings are owned by Kildare Sand & Gravel Limited.

A letter of consent from the landowner (Mr. Michael Ennis), regarding the making of an application to the EPA for a Waste Licence by Kildare Sand & Gravel Limited, is attached.

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<p><i>Attached overleaf:</i></p> <ul style="list-style-type: none"><li>▪ Certificate of Incorporation</li><li>▪ Landowner letter of consent</li></ul>	
---	---

# Short Certificate of Incorporation of a Company (Electronic Form, for Public Service Use only)

*I hereby certify*

that company number **303089**

**KILDARE SAND & GRAVEL LIMITED**

was Incorporated under the Companies Acts, 1963 to 1990,

as a Limited Company on

**Monday, the 8th day of March, 1999.**

Certified by me at Dublin, this **Tuesday, the 11th day of October, 2016.**

( 32AE7B )

Registrar of Companies

Companies Act 1963, section 370(1); Electronic Commerce Act 2000, sections 12 and 13

**Note**

The above certificate of incorporation is furnished free of charge by the registrar of companies and is valid solely for public service use. A process has been put in place whereby, where necessary, the certificate may be verified by a public service body on inquiry to the registrar.

The applicant for any public service who is required to produce a certificate of incorporation must certify below that the certificate has not been tampered with in any way. The certificate shall be retained by the public service organisation that requires its delivery and may be used as evidence of any wrongful use.

I, (name) \_\_\_\_\_

of (address) \_\_\_\_\_

hereby declare that this is one and the same as the Certificate of Incorporation of the above company that was made available electronically, for public service use, at my request, by the registrar of companies.

I further declare that to the best of my knowledge, information and belief, the said Certificate has not been altered or amended in any way.

I acknowledge that it is a criminal offence to forge a public document with intent to defraud or deceive, and that it is an offence to utter a forged document with intent to defraud or deceive, in each case punishable with imprisonment for a term not exceeding two years.

I make this Declaration for the benefit of

(name of public body) \_\_\_\_\_

to whom I am furnishing the Certificate.

\_\_\_\_\_  
Signature of Applicant      Date

Forgery Act 1913, section 4 and 6

*Tel: 045-524444*

*Thomastown Lodge,  
Kildare,  
Co. Kildare.*

To whom it may concern

I, Michael Ennis owner of Sand & Gravel Pit at Boherkill Rathangan give permission to Kildare Sand & Gravel to apply to EPA for a waste license on my lands at Boherkill, Rathangan, Co Kildare. Prior to commencement of operations via the proposed licence a formal lease will be entered into by both parties.

Signed



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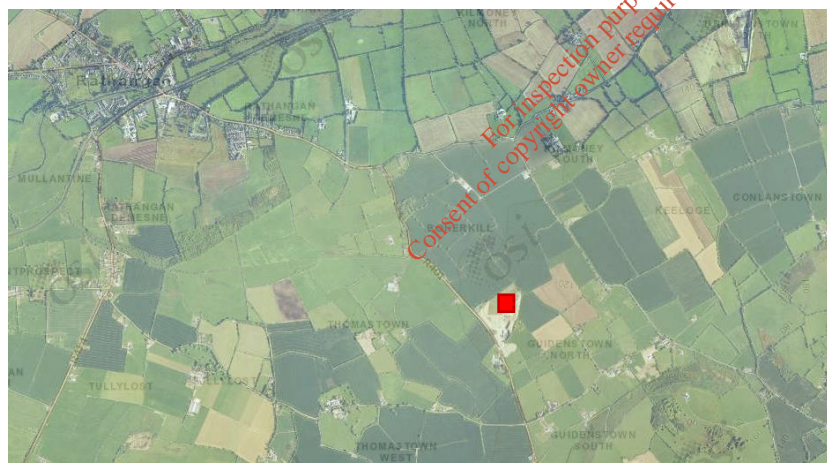
### ATTACHMENT B.2: Location Maps

The site is located entirely within the townland of Boherkill, Rathangan, Co. Kildare, approximately 3km south-east of Rathangan, Co. Kildare, on the R401 National Secondary route way and 5.5km north-west of Kildare town. The location of the activity is shown in **Figure B.2.1** and **Figure B.2.2** below. Drawings are attached.

**Figure B.2.1: Site Location Map (source: OSI)**



**Figure B.2.2: Site Location Aerial Photograph (source: OSI)**



### ATTACHMENT B.3: Appropriate Assessment

Appropriate Assessment screening was completed and is included in the EIS (Appendix 2), enclosed.

### ATTACHMENT B.6: Notices and Advertisements

A copy of the site notice, and the page of the newspaper containing the advertisement, are attached overleaf. The original application includes the complete newspaper, in which the advertisement was placed.

The location of the site notice on site is shown in **Drawing 151324-WLA-01**.



The Planning Authority has been informed, in writing, of this application to the EPA; correspondence attached.

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*Attached overleaf:*

- Letter to Planning Authority
- Copy of Site Notice
- Newspaper advertisement





**Kildare County Council  
Planning Department  
Áras Chill Dara  
Devoy Park  
Naas West  
Naas  
Co. Kildare**



6<sup>th</sup> December 2016

Dear Planning Department,

We are acting on behalf of Kildare Sand and Gravel Ltd.

Kildare Sand and Gravel Ltd. is making an application for a Waste Licence to the Environmental Protection Agency to effect the restoration of a quarry at Boherkill, Rathangan, Co. Kildare.

The Planning Department will be aware of the proposal, as per Planning Register Ref. 16/526.

Please find attached herewith the text of the newspaper advertisement/site notice for the EPA application.

Please do not hesitate to contact us, should you require any additional information.

Yours sincerely,

*Raphael Mc Evoy*

\_\_\_\_\_  
Raphael Mc Evoy  
RME Environmental

*Encl. copy of site notice*

## **APPLICATION TO THE ENVIRONMENTAL PROTECTION AGENCY FOR A WASTE LICENCE**

Kildare Sand & Gravel Limited, with registered offices at Hazelwood House, Prosperous, Co. Kildare, is applying to the Environmental Protection Agency (EPA) for a Waste Licence for a site at Boherkill, Rathangan, Co. Kildare (Grid Ref. E269079, N216731).

The proposal is to restore a sand and gravel quarry to previous agricultural use. The proposed input is 225,000 tonnes per annum, over a 10-year lifetime (approx. 1.5 million m<sup>3</sup> total void capacity). Proposed input materials are inert soil and stones (for site restoration), and inert concrete, bricks and tiles/ceramics (for construction of internal site haul roads). Any non-inert construction and demolition waste unintentionally imported to site will be separated, prior to removal off-site to authorised facilities. Temporary stockpiling of topsoil and subsoil is proposed. Continued excavation on a limited basis of residual sand and gravel. Site plant will include a bulldozer/excavator, weighbridge, wheel-wash and temporary site offices.

The proposed classes of activity, as per the Third and Fourth Schedules of the Waste Management Acts 1996 to 2011, are:

- R 5, Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials (Principal activity)
- R 3, Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals
- R 4, Recycling/reclamation of metals and metal compounds
- R 10, Land treatment resulting in benefit to agriculture or ecological improvement
- R 12, Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)
- R 13, Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)
- D 15, Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)

An environmental impact statement will be submitted to the Agency with the application. A copy of the application for a waste licence, the environmental impact statement, and such further information relating to the application as may be furnished to the Agency in the course of the Agency's consideration of the application, will, as soon as is practicable after receipt by the Agency, be available for inspection or purchase, at the headquarters of the Agency.







**ATTACHMENT B.6(c): Planning under Consideration**

Correspondence from Kildare County Council, Planning Department, is attached overleaf to confirm receipt of the planning application.

The application is at 'Further Information' stage; further information was submitted by/on behalf of the applicant for planning purposes on 21<sup>st</sup> October 2016.

**ATTACHMENT B.6(d): Planning Granted**

Planning permission for the proposed development as per this Waste Licence Application is under consideration by the Planning Authority (as detailed in B.6(c)). The site is subject to a number of previous planning permissions, which are detailed in **Table B.6.1** below.

**Table B.6.1: Planning History**

Planning Ref.	PA/An Bord Pleanala	Date of Decision	Brief description	EIS required?
16/526	Kildare County Council	Under consideration - SEE ATTACHMENT B.6(c)	Restoration of existing excavated gravel pit to the original ground levels and use as agricultural land	Yes
15/515	Kildare County Council	12/08/2015	Extension of Duration of 07/188: Retention Permission & Permission for development at this site	No
07/188	Kildare County Council	07/11/2007	retention permission & permission for development at this site	Yes
01/1270	Kildare County Council	14/05/2002	Retention of gravel pit and extension of same to 2.83 hectares for the extraction and dry screening and grade 1C fill, new enlarged recessed entrance at existing double entrance, security hut and portaloo and all associated site works	No

In accordance with the requirement to "submit the planners report and final decision for each permission granted that was associated with an EIS", find same attached for Planning Reg. Ref. 07/188.

Attached overleaf:

- Correspondence from Kildare CC - receipt of planning application and FI
- Planning permission 07/188



Comhairle Contae Chill Dara  
Kildare County Council



**Date:** 30/05/2016  
**Pl. Ref:** 16/526

Michael Ennis  
Kildare Architects & Design Ltd  
Abbey House  
White Abbey Road  
Kildare Town  
Co. Kildare

**Re: Planning Reference: 16/526 - Michael Ennis - PERMISSION, Restoration of the existing excavated gravel pit (previously granted planning permission 01/1270, 07/188 and 15/515) to the original ground levels and use as agricultural land, in order to comply with condition 2(a) of planning permission 07/188, by importing c1,500,000 tonnes (I) of imported inert natural materials, principally excess soil, stones, and/or broken rock, excavated on construction sites, (ii) Recovery of imported inert construction materials, including stones, granular fill, concrete blocks, bricks and ceramic tile and (iii) reinstating existing overburden contained on site and all other associated site works for a period of 10 years. The planning application is accompanied by an Environmental Impact Statement (EIS). The application relates to a restoration development for the purpose of an activity requiring a waste licence to be issued by the Environmental Protection Agency at Boherhill Rathangan Co. Kildare**

Dear Sir/Madam,

I wish to acknowledge receipt of your application for the above development which was received on 23/05/2016 and to state that it is being examined by the Planning Section and is currently receiving attention.

Please note that no work should be carried out in connection with the proposal until a written grant of permission to do so has been received by you from this Council. The carrying out of work, without the permission referred to, could render you liable for legal proceedings under the Planning Acts.

Any further correspondence relating to this application must quote the above reference number.

Yours faithfully,

  
Senior Executive Officer Planning  
KILDARE COUNTY COUNCIL



Date: 24/10/2016  
Our Ref: 16/526

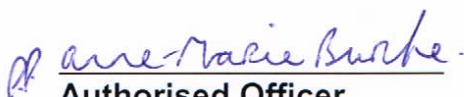
Michael Ennis  
c/o Kildare Architects & Design Ltd  
Abbey House  
White Abbey Road  
Kildare Town  
Co. Kildare

**Re: Planning Application Ref: 16/526 - Michael Ennis – PERMISSION for restoration of the existing excavated gravel pit (previously granted planning permission 01/1270, 07/188 and 15/515) to the original ground levels and use as agricultural land, in order to comply with condition 2(a) of planning permission 07/188, by importing c1,500,000 tonnes (i) of imported inert natural materials, principally excess soil, stones, and/or broken rock, excavated on construction sites, (ii) Recovery of imported inert construction materials, including stones, granular fill, concrete blocks, bricks and ceramic tile and (iii) reinstating existing overburden contained on site and all other associated site works for a period of 10 years. The planning application is accompanied by an Environmental Impact Statement (EIS). The application relates to a restoration development for the purpose of an activity requiring a waste licence to be issued by the Environmental Protection Agency at Boherhill, Rathangan, Co. Kildare.**

Dear Sir/Madam,

I acknowledge receipt of further information at this office on 21/10/2016 in connection with the above application for planning permission and confirm that your application is receiving attention.

Yours faithfully,

  
**Authorised Officer**  
**Kildare County Council**

Date: 27/08/2008  
PI Ref.: 07/188

Michael Ennis  
Kildare Architects & Design Ltd  
Abbey House  
White Abbey Road  
Kildare Town  
Co. Kildare

PLANNING REGISTER NUMBER: 07/188  
APPLICATION RECEIPT DATE: 07/02/2007

**PERMISSION sought for retention permission & permission for development at this site at Boherkill Rathangan Co. Kildare**

In pursuance of the powers conferred upon them by the Planning and Development Act 2000 - 2006, Kildare County Council have by order granted PERMISSION to the above named, for the above development subject to the 29 conditions set out in the Schedule attached.

Date: 27/08/2008

Signed: \_\_\_\_\_  
Senior Executive Officer Planning  
Kildare County Council

NOTE: The permission herein granted shall, on the expiration of the period of 5 years beginning on the date of the granting of permission, cease to have effect as regards:

- (1) In case the development to which the permission relates is not commenced during the period, the entire development, and
- (2) In case such development is so commenced, so much thereof as is not completed within that period.

It should be noted that outline permission will cease to have effect after a period of 3 years and also that such permission is subject to the subsequent grant of permission consequent on the grant of outline permission by the Planning Authority and that, until such permission has been obtained to detailed plans of the development proposed, the development is NOT AUTHORISED.



**RE:/ Planning Permission and Retention Planning Permission is sought for development at this site Boherkill, Rathangan, Co. Kildare. The development consists of retention of 2.178ha and extension of 3.772ha to existing gravel pit, planning ref.no. 01/1270, and all ancillary works. The application is accompanied by an EIS. Michael Ennis 07/188.**

**Schedule 1 - Considerations and Reasons on which this Decision is based as required by Article 31 of the Planning and Development Regulations 2001:**

Having regard to the nature and design of the proposed development, and the character of adjoining development, it is considered that, subject to compliance with the conditions attached, the proposed development would not seriously injure the amenities of the area or of property in the vicinity, and would be in accordance with the proper planning and sustainable development of the area.

**Schedule 2 - Conditions:**

1. The development shall be carried out in accordance with documentation and particulars submitted to the Planning Authority on 2/2/07 and as amended on the 14/9/07, except where altered or amended by conditions in this permission.

**Reason:** To enable the Planning Authority to check the proposed development when completed, by reference to approved particulars.

2. (a) Permission for the proposed development is for a limited period only and shall expire 7 years from the final grant date of this permission. All plant and machinery items shall be removed from the site and the lands shall be restored to agricultural use and landscaped as per drawing 061063-AI-01 submitted to the Planning Authority on the 14<sup>th</sup> September 2007 within one year of the expiration of this permission or of the permanent cessation of operations if before this date.  
  
(b) Output of materials from the site shall not exceed 265,650 tonnes per annum.  
  
(c) Restoration operations shall be carried out in a progressive manner throughout the life of the proposed development as indicated on drawing 061063-AI-06 submitted to the Planning Authority on the 14<sup>th</sup> September 2007.

**(d)** Truck movements to and from the site shall not exceed 50 lorry movements in each direction (in and out of the site) per working day.

**Reason:** In the interests of defining the permission and orderly development of the area.

3. Buffer zones to the northwest of the site as indicated on drawing 061063 – AI – 03 submitted to the Planning Authority on the 14<sup>th</sup> September 2007 shall be completed prior to the commencement of extraction activities on phase 1 on site.

**Reason:** In order to protect the amenities of the adjoining property.

4. The applicant shall ensure that activities on the site are carried out in such a manner so as not to have any adverse effect on groundwater, watercourses, field drains, the drains of adjacent lands or any other drainage system including that of the public roadway. Systems shall be put in place so that only clean surface water from the site shall gain access to any watercourse.

**Reason:** To ensure the proper planning and sustainable development.

5. Within 2 months of the cessation of restoration operations on the site a topographic survey shall be carried out in order to confirm that the site has been restored in accordance with that proposed in the planning application and accompanying Environmental Impact Statement. This shall be submitted for the written agreement of the Planning Authority.

**Reason:** In the interests of proper planning and sustainable development.

6. Prior to the commencement of development the applicant shall submit to the satisfaction of the Department of Environment Heritage and Local Government the following:

**(a)** A report detailing the impact the proposed development will have on birds (in particular colony of Sandmartins, 15-20 pairs) and proposed mitigation measures accordingly.

**(b)** A survey of the subject site for frogs and newts and appropriate mitigation measures to maintain their favourable conservation status.

**Reason:** In the interest of proper planning and development

7. Contaminated surface water arising on site shall be contained on site and shall not be allowed discharge to any open drain or watercourse. Only clean uncontaminated surface water shall discharge to the surface water system.

**Reason:** In the interest of proper planning and development

8. Excavation shall not take place below a level of at least 1 metre above the highest water table level on site.

**Reason:** In the interest of proper planning and development

9. All surface water from the carpark areas shall pass through adequately sized and sited petrol/oil interceptor(s) before being discharged to the surface water system

**Reason:** In the interest of proper planning and development

10. Adequately sized fats, oils, greases interceptors shall be installed on all kitchen waste and canteen waste drainage lines.

**Reason:** In the interest of proper planning and development

11. All overground oil, chemical storage tank(s) shall be adequately bunded to protect against spillage. Bunding shall be impermeable and capable of retaining a volume equal or greater than 100% of the capacity of the largest tank within the bunding area or 25% of the total volume of the substance which could be stored within the area, whichever is greater. Filling and offtake points shall be located within the bunded areas.

**Reason:** In the interest of proper planning and development

12. (a) The total dust emission arising from the on-site operations associated with the proposed development shall not exceed 130 milligrams per square meter per day, averaged over a continuous period of 30 days, when measured as deposition of insoluble particulate matter at any position along the boundary of the site. No stripping of topsoil or overburden shall be carried out in periods of dry weather.

(b) A Dust Assessment shall be carried out on the site by a competent



**(D)** A Dust Assessment shall be carried out on the site by a competent Environmental Consultant within 1 month of commencement of on-site operations and continuously thereafter. The locations of the dust monitoring stations shall be agreed with the Planning Authority. The Dust Assessment Reports shall be submitted to the Planning Authority on a monthly basis.

**Reason:** In the interest of proper planning and development

13. **(a)** The noise level attributable to all on-site operations associated with the proposed development shall not exceed 55 dB(A) (Leq) over a continuous one hour period between 0800 hours and 1800 hours Monday to Friday inclusive (excluding bank holidays), and between 0800 hours and 1300 hours on Saturdays, when measured outside any noise sensitive location house in the vicinity of the site. Sound levels shall not exceed 45 dB(A) (Leq) at any other time.

**(b)** A Noise Assessment shall be carried out on the site by a competent Noise Consultant within 1 month of commencement of on-site operations and at 6 monthly intervals thereafter. The locations of the noise monitoring stations shall be agreed with the Planning Authority. The Noise Assessment Report shall be submitted to the Planning Authority.

**Reason:** In the interest of proper planning and development

14. Programs shall be implemented for the minimisation, reuse, recovery and recycling of waste, in accordance with the Waste Management Act 1996 and Regulations made thereunder. No burning of waste shall occur on site.

**Reason:** In the interest of proper planning and development

15. An Environmental Audit of the site operations shall be carried out annually on behalf of the developer by a competent environmental consultant. Details of the monitoring arrangements, including locations and frequency of monitoring shall be submitted to the Planning Authority within three months of commencement of on-site operations. The audit should be prepared with reference and should take into account the requirements of the 2006 EPA publication 'Environmental Management Guidelines in the Extractive Industry' and shall be submitted to the Planning Authority on an annual basis.

**Reason:** In the interest of proper planning and development

16. All foul water not removed from the site shall discharge to the existing septic tank.

**Reason:** In the interest of proper planning and development

17. Lines of sight shall be maintained strictly in accordance with Design Manual for Roads and Bridges document (TD 41/95).

**Reason:** In the interest of traffic safety.

18. Wheel washing facilities will be provided within the site so as to prevent deposition of mud and debris on the public roads.

**Reason:** In the interest of traffic safety.

19. Car parking spaces shall be provided for all vehicles associated with the running of the business, staff cars, trucks etc on a durable permanent macadam surface within the curtilage of the site. Each car space shall be marked in 2.4 metre x 4.8 metre bays in 100mm wide white lines with a durable permanent material. Circulation aisles shall be 6.0 metres wide.

**Reason:** In the interest of traffic safety.

20. No surface water run off from the site shall be discharged onto the public road.

**Reason:** In the interest of traffic safety.

21. Existing land and roadside drainage shall not be impaired and new entrance to the site shall be designed and shaped to ensure the uninterrupted flow of existing roadside drainage.

**Reason:** To prevent interference with existing roadside drainage in the interest of proper development.

22. Public lighting shall be provided throughout the site to the standards laid down by the E.S.B. and to the satisfaction of the Planning Authority.

**Reason:** In the interest of traffic safety.

23. The applicant shall keep a record of traffic movements in and out of the site. This record should contain details of all traffic movements, including origin and destination of vehicles, registration and type of vehicle, over the previous six months. This record must be available for

inspection by the Planning Authority during working hours.

**Reason:** To assess the impact of the development on the existing road network and to ensure that the levels of generated traffic are as per applicants submission.

24. The applicant shall ensure that no vehicles which exceed the legal maximum axle weight limit shall use the public road.

**Reason:** To ensure that the road system serving the development is protected, in the interest of proper planning and development of the area.

25. Applicant to erect Advance Warning Signs 150 metres each side of the entrance stating "Caution Quarry Entrance", signs not to interfere with Sight Lines.

**Reason:** In the interest of traffic safety.

27. Existing land drains should not be affected.

**Reason:** In the interest of proper planning and development

28. Surface water should be discharged to a surface water system.

**Reason:** In the interest of proper planning and development

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12/8

Grant  
13/8

**KILDARE COUNTY COUNCIL  
PLANNING DEPARTMENT**

**Planning Report**



**Reg. Ref. 15/515 (& 07/188)**

<b>Name of Applicant</b>	<b>Michael Ennis</b>
<b>Address of Development</b>	Boherkill, Rathangan.
<b>Development</b>	Gravel pit
<b>Type of Permission</b>	Extend appropriate period of planning permission reg. ref. 07/188 (PL 09.226737).
<b>Date Inspected</b>	07/08/15
<b>Due Date</b>	<b>13/08/15</b>

**1)Description of Proposal**

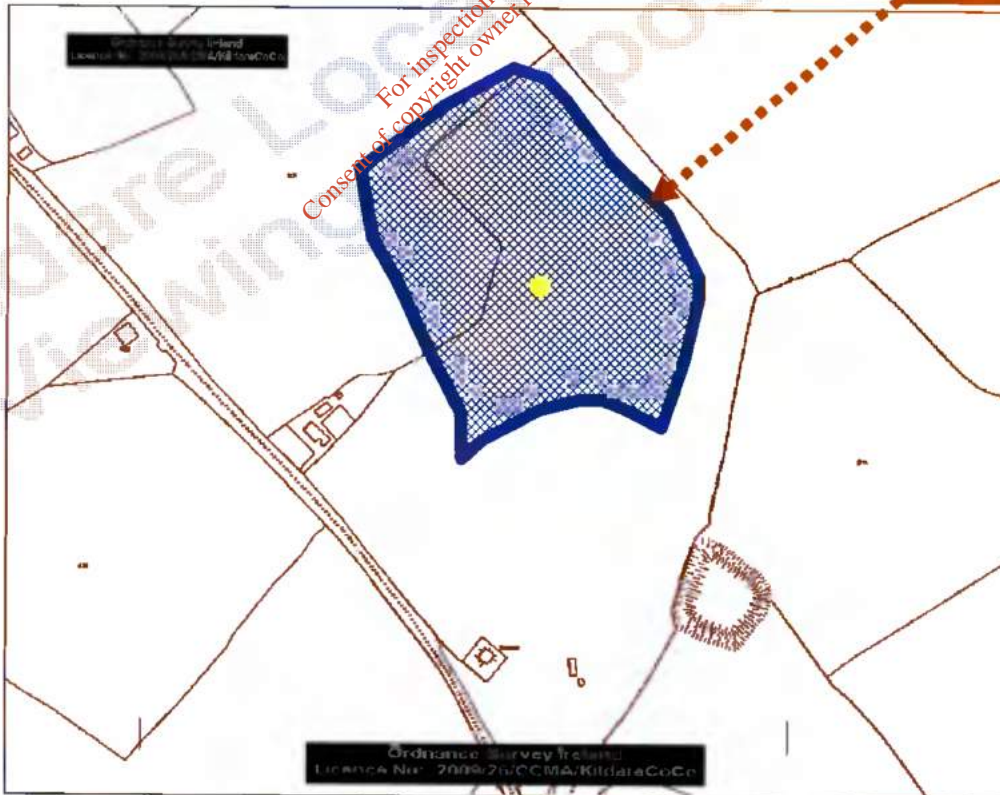
The applicant is seeking to extend the appropriate period of permission reg. ref. 07/188 (PL 09.226737). The said permission relates to the retention of a gravel pit with an area of 2.178 hectares and extension of gravel pit into an area of 3.77 hectares, and all ancillary site development works. (Previously granted under reg. ref. 01/1270).

**2)Site Location/ Context**

The gravel pit is located in the rural townland of Boherkill, c. 2.6km southeast of Rathangan town. It is accessed from the R401 Regional Road between Rathangan and Kildare town, just north of Thomastown Cross Roads.

Refer to OSI map extracts overleaf for additional details and to the site inspection photographs attached to this report.





### 3) Internal Reports

The application was referred to the Environment Section, to the Water Services Department, and to the Transportation Department. Both of the former have raised no objection to the application.

The report from the Transportation Department requests further information in regard to compliance and sightlines. It is considered that these issues do not come within the scope of this application.

### 4) Relevant Planning History

**01/1270 (PL 09.130086):** Permission **granted** to Michael Ennis on 17/04/03 for retention of gravel pit and extension of same to 2.83 hectares for the extraction and dry screening and grade 1C fill, new enlarged recessed entrance at existing double entrance, security hut and portaloo and all associated site works.

**07/188 (PL 09.226737):** Permission **granted** to Michael Ennis on 27/08/08 for retention of gravel pit with an area of 2.178 hectares and extension of gravel pit into an area of 3.77 hectares and all ancillary site development works. Condition numbers no. 26 and no. 29 were the subject of a first party appeal to An Bord Pleanala in relation to the requirement for contributions. An Bord Pleanala decided to remove the two conditions. Condition no. 2(a) of the permission reads as follows:

*2. (a) Permission for the proposed development is for a limited period only and shall expire 7 years from the final grant date of this permission. All plant and machinery items shall be removed from the site and the lands shall be restored to agricultural use and landscaped as per drawing 061063-AI-01 submitted to the Planning Authority on the 14th September 2007 within one year of the expiration of this permission or of the permanent cessation of operations if before this date.*

### 5) Statutory Provisions

Section 42 of the Planning and Development Act 2000 as amended by Section 28 of the Planning and Development (Amendment) Act 2010 applies:

28. - The Principal Act is amended by the substitution of the following section for section 42:

42. - (1) On application to it in that behalf a planning authority shall, as regards a particular permission, extend the appropriate period by such additional period not exceeding 5 years as the authority considers requisite to enable the development to which the permission relates to be completed provided that each of the following requirements is complied with:

(a) either -

(i) the authority is satisfied that—



(I) the development to which the permission relates was commenced before the expiration of the appropriate period sought to be extended,

(II) substantial works were carried out pursuant to the permission during that period, and

(III) the development will be completed within a reasonable time,

Or:

(ii) the authority is satisfied—

(I) that there were considerations of a commercial, economic or technical nature beyond the control of the applicant which substantially militated against either the commencement of development or the carrying out of substantial works pursuant to the planning permission,

(II) that there have been no significant changes in the development objectives in the development plan or in regional development objectives in the regional planning guidelines for the area of the planning authority since the date of the permission such that the development would no longer be consistent with the proper planning and sustainable development of the area,

(III) that the development would not be inconsistent with the proper planning and sustainable development of the area having regard to any guidelines issued by the Minister under section 28, notwithstanding that they were so issued after the date of the grant of permission in relation to which an application is made under this section, and

(IV) where the development has not commenced, that an environmental impact assessment, or an appropriate assessment, or both of those assessments, if required, was or were carried out before the permission was granted.

(b) the application is in accordance with such regulations under this Act as apply to it,

(c) any requirements of, or made under those regulations are complied with as regards the application, and

(d) the application is duly made prior to the end of the appropriate period.

#### **6)Assessment**

Permission was granted under reg. ref. 07/188 on 27/08/08 for a period of 7 years. The appropriate period of the permission will therefore end on 26/08/15. The application was received by the Planning Authority on 19/06/15, prior to the end of the appropriate period and also within the last year of same.

The premise of the application is being made on the basis that substantial works have been carried out on the site. In view of the aforesaid, the criteria

under Section 42(a)(i) of the Planning and Development Act 2000 (as amended) apply, and are examined below as follows:

(I) the development to which the permission relates was commenced before the expiration of the appropriate period sought to be extended,

On the basis of the submitted information the development the subject of the permission commenced in September 2009 i.e. before the expiration of the appropriate period sought to be extended.

(II) substantial works were carried out pursuant to the permission during that period, and

The application details that c. 1.5 million tonnes of material has been excavated from the site. The said figure is noted relative to the requirement of condition no. 2(b) of the permission, which states that:

*(b) Output of materials from the site shall not exceed 265,650 tonnes per annum.*

A figure of 265,650 tonnes of material per year over the 7 year life of the permission amounts to 1.859,550 tonnes in total. This therefore means that there is c. 359,550 tonnes of material that remains to be extracted from the site.

The application cites that the shortfall in extracted material on the site has been due to the economic downturn in the construction industry, which reduced the need for materials. It is also detailed that the aforesaid had implications for the restoration of the pit, because areas where restoration was due to occur were not fully extracted.

The stated extracted tonnage from the site to date is considered to come within the scope of substantial works. Please also refer to the attached site inspection photographs with regard to the current situation on the site.

(III) the development will be completed within a reasonable time

The application seeks to extend permission reg. ref. 07/188 by a further 5 years. The permission was initially granted for a period of 7 years.

Having regard to the stated works that have been carried out on the site to date, it is considered the remaining development can be completed within a reasonable time.

#### **7) Recommendation**

It is recommended that the application to extend the appropriate period of reg. ref. 07/188 (PL 09.226737) **is granted** for a period of 5 years from the date on which the permission expires, as follows:



In accordance with the provisions of Section 42 of the Planning and Development Act 2000 (as amended), Kildare County Council hereby extend the appropriate period of planning permission reg. ref. 07/188 (PL 09.226737) by an additional five years from 26/08/15. The permission shall expire on 25/08/20.

The development shall be carried out in accordance with the terms and conditions of reg. ref. 07/188 (PL 09.226737) and any agreements entered into thereunder.

  
**Wesley Keogh**  
Assistant Planner  
12/08/15

*Done Dumbare ASEP*  
*12/8/2015*

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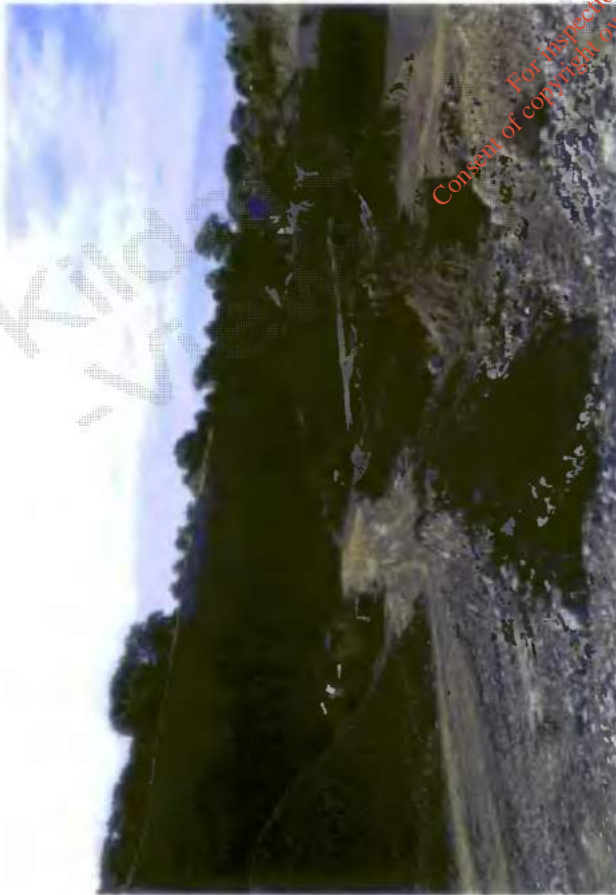


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**ATTACHMENT B.7: Type of Waste Activity, Tonnages and Fees**

Classes of activity have been identified in accordance with the Third Schedule or Fourth Schedule to the Waste Management Acts 1996 to 2010, as amended by the European Communities (Waste Directive) Regulations, 2011.

The proposed facility is a recovery facility for uncontaminated waste soils, which will facilitate the restoration of a quarry.

The principal activity is R 5, "*Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials*".

Other ('non-principal') waste activities have been identified as follows:

R 3, "*Recycling /reclamation of organic substances which are not used as solvents (including composting and other biological transformation processes), which includes gasification and pyrolysis using the components as chemicals*" provides for the importation and placement of topsoil as final capping.

R 4, "*Recycling/reclamation of metals and metal compounds*" makes provision for the segregation of metals which may be delivered inadvertently to site mixed in a load of inert material. Any metals will be salvaged and transferred off-site to an authorised facility for recovery.

R 10, "*Land treatment resulting in benefit to agriculture or ecological improvement*" is deemed relevant as the proposed facility is a quarry restoration project.

R 12, "*Exchange of waste for submission to any of the operations numbered R 1 to R 11 (if there is no other R code appropriate, this can include preliminary operations prior to recovery including pre-processing such as, amongst others, dismantling, sorting, crushing, compacting, pelletising, drying, shredding, conditioning, repackaging, separating, blending or mixing prior to submission to any of the operations numbered R1 to R11)*" makes provision for basic sorting activities which may be applied to a minority of incoming loads of inert waste, e.g. segregation of non-inert waste, which will be directed off-site to an authorised facility for recovery. Processing of inert Construction & Demolition (C&D) waste will be limited to the separation and quarantine of any small volumes of non-inert C&D waste (principally metal, timber, PVC pipes and plastic) unintentionally imported to site.

R 13, "*Storage of waste pending any of the operations numbered R 1 to R 12 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)*" makes provision for the temporary storage of materials on-site, which may have been segregated from incoming loads of inert waste, prior to removal off-site to an authorised facility for recovery. It also provides for the stockpiling of incoming materials prior to recovery on site.

D 15, "*Storage pending any of the operations numbered D 1 to D 14 (excluding temporary storage (being preliminary storage according to the definition of 'collection' in section 5(1)), pending collection, on the site where the waste is produced)*" makes provision for the temporary storage of materials on-site, which may have been segregated from incoming loads of inert waste, prior to removal off-site to an authorised facility for disposal.

**SECTION C: MANAGEMENT OF THE ACTIVITY**

**ATTACHMENT C.1: Site Management**

An organisation chart is provided in **Figure C.1.1**.

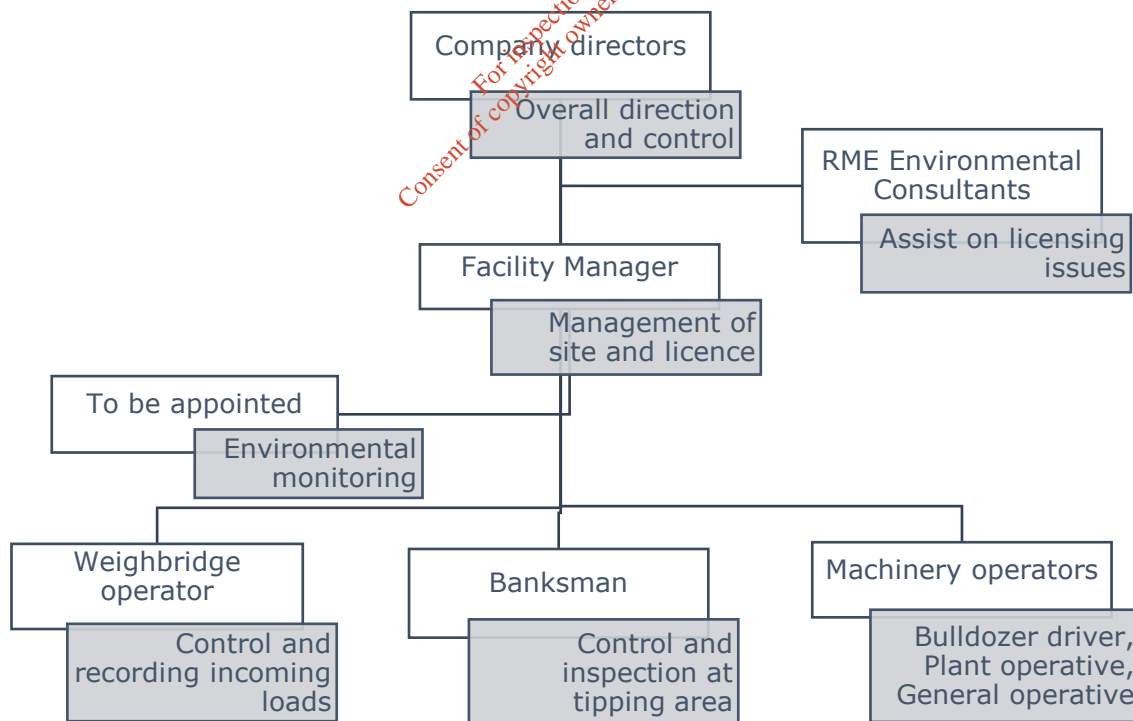
Existing quarry personnel will be retained to staff the soil recovery facility.

The nominated Facility Manager will attend a recognised training course in waste management, to be agreed with the Agency.

Additional expertise will be acquired for the purposes of managing a licensed facility. The applicant has retained the services of RME Environmental, a qualified and experienced environmental consultancy in the waste management/site restoration sector. RME Environmental will assist site staff in establishing the facility’s Environmental Management System, including practical issues surrounding the Waste Acceptance Procedure, staff training and licence compliance. RME Environmental will have a presence on site on a weekly basis, for the first six months of operation, as a minimum.

Independent, qualified environmental consultants will be retained by the Applicant to comply with licence requirements relating to environmental monitoring and specialist engineering requirements.

**Figure C.1.1: Proposed Organisation Chart**



**ATTACHMENT C.2: Environmental Management System**

The facility does not currently have an Environmental Management System (EMS) in place. An EMS will be designed by competent personnel and will be implemented at the site, in accordance with licence requirements, which will typically include the following documentation:

- Management and reporting structure
- Schedule of environmental objectives and targets
- Environmental Management Programme
- Environmental management documentation system
- Corrective action procedure
- Awareness and training procedure
- Communications programme
- Maintenance programme

**ATTACHMENT C.3: Hours of Operation**

(a) Proposed hours of operation

The proposed hours of operation are between 08.00hours and 18.00hours each weekday and 08:00hours to 13:00hours on Saturday. The site will not operate at any other time.

(b) Proposed hours of waste acceptance/handling.

The proposed hours of waste acceptance/handling at the site are between 08.00hours and 18.00hours each weekday and 08:00hours to 13:00hours on Saturday. No materials will be accepted at any other time.

(c) Proposed hours of any construction and development works at the facility and timeframes (required for landfill facilities).

Any construction/development works will be completed within the proposed hours of operation/waste acceptance/handling, i.e. between 08.00hours and 18.00hours each weekday and 08:00hours to 13:00hours on Saturday.

(d) Any other relevant hours of operation expected.

The proposed hours of waste operation/acceptance/handling at the site, i.e. between 08.00hours and 18.00hours each weekday and 08:00hours to 13:00hours on Saturday, will also apply to extractive operations ongoing on-site.



## SECTION D: INFRASTRUCTURE AND OPERATION

### ATTACHMENT D.1: Infrastructure

#### D.1.a Site security arrangements including gates and fencing

Access to the application site can only be gained via the access road leading off the existing local road R401 and main site entrance. All vehicular traffic accessing the site must stop at a security barrier in front of the temporary site office before gaining access.

For the purpose of the proposed activity, incoming loads will be recorded at the weighbridge and requisite details will be recorded, including the source of the material, haulier and Waste Collection Permit details, time and date, weight in/out.

Aside from the access road to the existing facility, the entire site boundary is closed off by post and wire fences and agricultural field gates.

All gates will remain padlocked for the duration of the site restoration activities.

#### D.1.b Designs for site roads

Upon entry to the site, trucks will initially travel over a stoned road surface between the site security barriers and the existing temporary wheel-wash facility, before travelling over a network of stoned internal roads to get to the active restoration/tipping area.

Suitable incoming materials, e.g. concrete, bricks, tiles/ceramics, will be used for the construction of internal site haul roads. Proposed site haul roads are outlined on **Drawing 151324-WLA-11**.

Provision for employee and visitor car parking is currently provided on a stoned out area adjacent to the temporary site office, before the site security barrier.

#### D.1.c Design of hardstanding areas

A temporary hardstanding area constructed of secondary aggregate is proposed in the centre of the application site for the recovery of inert construction and demolition waste imported to site and for separation and storage (in skips) of any separated non-inert construction and demolition wastes inadvertently mixed with it, most likely to comprise metal, timber, PVC pipes, plastic, etc. This hardstanding area also provides for the storage of plant, equipment and materials.

It is envisaged that the eastern side of the hardstanding area will be sealed by a 100mm thick reinforced concrete slab over 150mm of granular sub-base and used as a waste inspection and quarantine area.

Suitable incoming materials, e.g. concrete, bricks, tiles/ceramics, will be used for the construction of certain hardstanding areas.

#### D.1.d Plant

It is proposed to install a weighbridge (an existing weighbridge will be replaced) along the internal access road in front of the temporary site office, in order to record material-in and material-out. Plant (both tracked and wheeled) maintained on site will principally comprise mechanical excavators and/or bulldozers.

**D.1.e Wheel-wash**

In order to prevent the movement of soil off-site, onto public roads, a wheel-wash facility is installed close to the site entrance; the wheel-wash will be maintained. All egressing site traffic will be required to pass through the wheel-wash.

**D.1.f Laboratory facilities**

No on-site laboratory facilities are proposed. Laboratory testing of soil, surface water, groundwater and dust, as appropriate, will be undertaken off-site at an appropriately accredited geo-environmental laboratory.

**D.1.g Design and location of fuel storage areas**

It is not intended to provide bunded fuel storage tanks at the application site. Fuel for site plant and equipment will be stored in double-skin bowsers located on the hardstanding area

A small bunded tank for waste oils will be provided on the concrete slab at the waste quarantine area. This tank will be emptied at intervals by a licensed waste contractor and disposed off-site at a suitably licensed waste facility.

No re-fuelling of HGV trucks will take place on site. Oil and lubricant changes for wheeled or tracked plant will be undertaken on-site at the existing hardstanding area.

**D.1.h Waste quarantine areas**

A temporary waste inspection and quarantine area will be constructed to the north of the entrance. The waste inspection and quarantine area will be sealed by a 100mm thick reinforced concrete slab over 150mm of granular sub-base and bunded to a design storm volume.

**D.1.i Waste inspection areas**

A temporary waste inspection and quarantine area will be constructed to the north of the entrance. The waste inspection and quarantine area will be sealed by a 100mm thick reinforced concrete slab over 150mm of granular sub-base and bunded to a design storm volume.

**D.1.j Traffic control**

All traffic to and from the application site will enter and leave via the existing entrance which fronts onto the local road R401. The existing site access has been designed to accord with the standards set out with the 'Design Manual for Roads and Bridges' and meets with planning permission requirements.

Internally within the application site, warning notices, direction signs and speed restriction signs will be established along paved and/or unpaved roads.

All HGV traffic egressing the application site will be required to pass through a temporary wheel-wash facility and weighbridge at the end of the paved internal road.

**D.1.k Sewerage and surface water drainage infrastructure**

At the present time, site staff use a temporary Portaloo provided on the hardstanding area and it is emptied / replaced as required by an approved waste contractor. As per Further Information submitted to the planning authority (RME Environmental, October

2016), this will be replaced by a wastewater holding tank for site toilets. The proposed holding tank has been appropriately sized, and will be routinely emptied by an appropriately-authorized operator to a local wastewater treatment plant.

With the exception of the sealed concrete slab at the waste inspection and quarantine area, it is not intended to provide any site drainage infrastructure to collect and remove surface water runoff at the application site. During the infilling of the restoration site, surface water will be allowed to run over the existing ground surface to collect in surface ponds and discharge to groundwater. Some rainfall may also percolate downwards through the backfilled soil to the underlying groundwater table. At no time during the restoration works will surface water run-off be directed to watercourses or ponds beyond the site boundary. The temporary waste inspection and quarantine area, will be sealed by a 100mm thick reinforced concrete slab over 150mm of granular sub-base and bunded to a design storm volume.

Any surface water running over the surface of the concrete slab will be directed toward buried storage tanks with double-skin protection located on the western side of the hardstanding area. Surface water will only be collected in the buried tanks when suspect waste consignments are stored at the quarantine facility. At all other times, surface water run-off from the sealed slab will either percolate directly through the ground to the underlying groundwater table or will be directed over the existing ground surface to ponds in low lying areas, at which point it is effectively discharged to groundwater.

Should it be necessary to prevent high concentrations of suspended solids entering existing groundwater ponds, intermediate temporary surface water ponds will be constructed to hold runoff and encourage settling out of suspended solids prior to discharge to ground water ponds at a lower level. Any wastewater collected in the buried tanks will be emptied by licensed waste collectors and transferred to a collection tanker for disposal off-site at an approved wastewater treatment facility.

#### **D.1.l All other services**

Electric power, lighting and heating are provided at the temporary site office near the entrance to the application site.

Key personnel overseeing site backfilling and recovery operations at the application site will be contactable by mobile phone. It is possible to install permanent telephone, fax and email facilities at the temporary site office.

Mains water is available on site and can be used for any basic sanitary functions.

#### **D.1.m Plant sheds, garages and equipment compound**

Plant and equipment used in the backfilling and/or recovery activities will be stored on the temporary hardstanding area in the centre of the application site. Given the limited access into the site, it is not considered necessary to provide a security fence around this area to create a secure compound.

No workshops will be provided on site. Any plant or equipment which requires specialist repair or overhaul will be removed off-site if required. Small items of mobile or hand-held plant and equipment will be stored in closed metal containers at the hardstanding area as and when required.

**D.1.n Site accommodation**

At the present time, there is only a small security hut at the entrance to the application site. All site administration and management functions will be based at this office. Changing facilities will also be provided here. It is envisaged that staff will continue to access handwashing and canteen facilities at this office also. A review of these requirements will be assessed and appropriate small-scale adjustments made if required.

**D.1.o A fire control system, including water supply**

Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during backfilling and recovery operations. Fire extinguishers will be kept at the site office to deal with any localised small-scale fires which might occur. Additional fire-fighting capacity may be provided by storing water in a mobile bowser at the hardstanding area.

**D.1.p Civic amenity facilities**

No civic amenity facilities are proposed.

**D.1.q Any other waste recovery infrastructure**

Not applicable.

**D.1.r Composting infrastructure**

No composting activities/infrastructure are proposed.

**D.1.s Construction and Demolition waste infrastructure**

No specific C&D waste infrastructure proposed.

**D.1.t Incineration infrastructure (if applicable).**

Not applicable.

**D.1.u Any other infrastructure**

Any quarry-related plant will remain *in-situ* for the duration of quarrying/extraction activities.



## ATTACHMENT D.2: Facility Operation

### Unit Operations

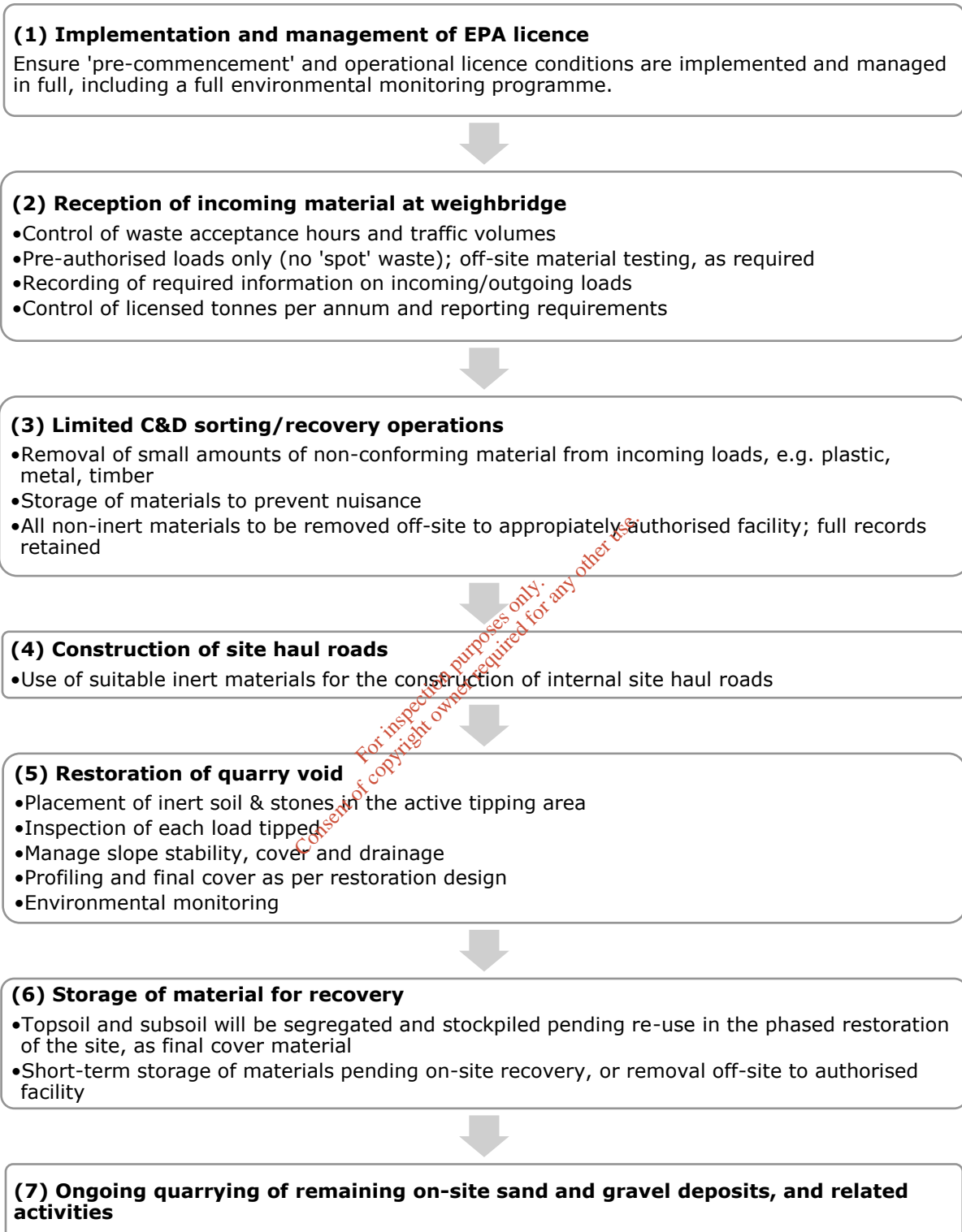
Unit operations for the proposed development, as shown on the Site Plan (**Drawing 151324-WLA-03**) have been identified as follows:

- (1) Implementation and management of EPA licence
- (2) Reception of incoming material at weighbridge
- (3) C&D sorting/recovery operations (limited to the separation and quarantine of any small volumes of non-inert C&D waste - principally metal, timber, PVC pipes and plastic - unintentionally imported to site).
- (4) Construction of site haul roads
- (5) Restoration of quarry void
- (6) Storage of material for recovery
- (7) Ongoing quarrying of remaining on-site sand and gravel deposits, and related activities

A flow diagram of the process is provided in **Figure D.2.1**.

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Figure D.2.1: Flow diagram of process



### Emissions Summary

Emissions to the environment are addressed in Section E; in summary, with reference to **Figure D.2.1**, emissions to the environment could potentially arise from the following:

- Mud from vehicular traffic being moved off-site (mitigation proposed)
- Exhaust emissions from vehicular traffic (vehicles must comply with legal requirements for pollution control)
- Wind-blown litter at recovery area, e.g. plastics (mitigation proposed)
- Dust emissions from inert materials (mitigation proposed)
- Noise emissions from site operations (mitigation proposed)

### Laboratory

No on-site laboratory facilities are proposed.

### Phasing of Restoration

Backfilling of the application site will proceed on a phased basis. A summary of the proposed phasing and the final ground level contours is shown in **Drawing 151324-WLA-06** and **Drawing 151324-WLA-07**.

The restoration of the site will result in a landform similar to that which existed prior to extraction of sand and gravel. The restored site will merge into the surrounding undulating pastoral landscape.

The proposal is to commence the restoration project at the northern boundary of the site and progress southwards year by year.

A cover layer comprising 150mm of topsoil and approximately 850mm of subsoil shall be placed over the inert backfilled materials on completion of each phase of restoration. This will be immediately planted with grass in order to promote stability and minimise soil erosion and dust generation. The lands will then be progressively returned to use as agricultural land.

In the course of the tenth (and final) phase of the site restoration works, all mobile plant and equipment will be removed off-site and any temporary site accommodation, infrastructure and services will be progressively removed off-site or decommissioned.

On completion, the final landform will be profiled to give a very slightly domed shape in order to facilitate surface water run-off into the *in-situ* sand and gravels along the site boundary, refer to final site contour map in **Drawing 151324-WLA-07**.

### Processing of Inert Construction and Demolition Waste

Processing of inert Construction & Demolition (C&D) waste will be limited to the separation and quarantine of any small volumes of non-inert C&D waste (principally metal, timber, PVC pipes and plastic) unintentionally imported to site.

Any non-conforming materials will be stored on-site in a manner to prevent nuisance, and will be removed off-site to appropriately authorised waste disposal or recovery facilities. Full records of materials removed off-site will be retained.

**Main Alternatives**

The issue of alternatives was addressed in the EIS for the proposed development, Section 1.8 (enclosed). The matter was further considered in Further Information submitted to the Planning Authority (enclosed herewith) (RME Environmental, October 2016).

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## SECTION E: EMISSIONS

### ATTACHMENT E.1: Emissions to Atmosphere

No direct emissions to atmosphere are proposed. Potential fugitive dust emissions are considered in Attachment E.6, environmental nuisances.

### ATTACHMENT E.2: Emissions to Surface Waters

No emissions to surface waters are proposed.

A surface water collection system (to underground, double-skinned tanks) is proposed at the waste inspection/quarantine area. Any wastewater collected in the buried tanks will be emptied by licensed waste collectors and transferred to a collection tanker for disposal off-site at an approved wastewater treatment facility. See Attachment F.1 for further details.

For all areas on site, other than the waste inspection/quarantine area, surface water will be allowed to run over the existing ground surface to collect in surface ponds and discharge to groundwater. At no time during the restoration works will surface water run-off be directed to watercourses or ponds beyond the site boundary.

On completion, the final landform will be profiled to give a very slightly domed shape, in order to facilitate surface water run-off into the *in-situ* sand and gravels along the site boundary.

The EIS for the facility proposes the following measures/procedures to mitigate against potential groundwater/surface water impacts:

- Containment of site fuels and oils, to prevent any accidental spillages which may migrate to the subsoils and underlying groundwater;
- Wherever possible a traffic management system would be put in place to reduce the potential conflicts between vehicles, thereby reducing the risk of a collision;
- A site speed limit would be enforced to further reduce the likelihood and significance of collisions;
- Refuelling of vehicles would either be undertaken in a surfaced compound area from a fuel tank(s) that is bunded or be undertaken off-site to minimise the risk of uncontrolled release of polluting liquids/liquors;
- A double-skinned mobile fuel bowser is used to refuel plant and machinery. Spill trays and spill kits will be provided at all times;
- Strict control measures to ensure only suitable material is allowed onto the site, i.e. thorough inspection of waste loads entering the site to confirm inert nature prior to deposition on-site;
- Only granular wastes will be deposited into areas immediately above the groundwater table to prevent the influx of suspended solids into groundwater;
- Maintenance of plant and machinery would be undertaken within a site compound area or offsite, as appropriate, to minimise the risk of uncontrolled release of polluting liquids;

- Only suitably permeable and inert material will be used in the restoration, thereby reducing the potential to create a low permeability zone which could hinder local/ regional groundwater recharge and/or creating an impermeable barrier to groundwater recharge.
- Any slurry spreading and/or organic fertiliser spreading on the restored agricultural ground will adhere strictly to the Good Agricultural Regulations S.I. No. 31 of 2014. Appropriate buffer zones will be maintained from all watercourses as stipulated in the Regulations when applying fertiliser and other chemicals to the land.
- It is proposed that groundwater monitoring is conducted at the site in order to monitor the groundwater quality.
- The settlement lagoon will be dredged to allow it to operate without overflowing to the natural sump at the northern boundary of the site. Regular dredging will maintain the functional operation of the lagoon.
- High absorbency mats, pig tails and drums are to be added/ maintained in the stock-piling areas of the site and in quarry vehicles to clean up any leaks from plant or machinery.
- No servicing or maintenance of any plant or machinery takes place within the proposed restoration areas. All plant and machinery is driven or tracked to the hardstanding area associated with the site entrance and between the entrance and the wheel-wash for service or maintenance works.
- High absorbency mats are provided to contain any spills that may occur.
- A double-skinned mobile fuel bowser is used to refuel plant and machinery on site. This is due to the fact that the bundled fuel storage tank has been subject to burglary.
- Hydrocarbon spill kits and drip trays will be maintained on site. The operator has in place an Emergency Response Procedure for hydrocarbon spills and appropriate training of site staff in its implementation. All waste oils are collected and removed off-site by an approved licensed waste collection contractor in the area.
- High absorbency mats are provided to contain any spills that may occur.
- All material to be used for the restoration will be thoroughly inspected to ensure only suitably permeable, inert material is deposited. Soil importation will be monitored by a competent site operative to monitor soil composition in order to avoid any impact on the underlying groundwater.
- It is proposed that groundwater monitoring be carried out biannually. This is recommended to ensure that the restoration of the site is not impacting on the groundwater beneath the site and to establish on-going trends in any groundwater monitoring boreholes.

### ATTACHMENT E.3: Emissions to Sewer

No emissions to sewer are proposed.

At the present time, site staff use a temporary Portaloo provided on the hardstanding area and it is emptied / replaced as required by an approved waste Contractor. As per Further Information submitted to the planning authority (RME Environmental, October 2016), this will be replaced by a wastewater holding tank for site toilets. The proposed

holding tank has been appropriately sized, and will be routinely emptied by an appropriately-authorized operator to a local wastewater treatment plant.

#### **ATTACHMENT E.4: Emissions to Groundwater**

No direct emissions to groundwater are proposed. Surface water and rainwater runoff will discharge to groundwater, as described in Attachment E.2 above.

Additional measures/procedures to mitigate against potential groundwater/surface water impacts are detailed in Attachment E.2.

#### **ATTACHMENT E.5: Noise Emissions**

Noise emissions will be associated with incoming/outgoing HGVs and mobile quarry/restoration plant and machinery.

The EIS concluded that, during normal operation of the facility, there should be a negligible noise impact at all nearby residents. Noise mitigation measures are outlined in the EIS, and considered in Attachment F.1.

#### **ATTACHMENT E.6: Environmental Nuisances**

##### **Bird Control**

Due to the inert nature of incoming materials, bird control is not anticipated as being required.

##### **Dust Control**

Dust will be minimised via the following methods:

- Phased restoration of the site, with final cover and grassing being applied to each completed phase, as soon as practicable.
- Use of a wheel-wash to prevent off-site movement of muck/dust onto public road network.
- Dust suppression/sprays at items of plant/activities which are dust-generating, as necessary.
- Maintenance and good housekeeping at site roads and hardstanding areas.
- Servicing and maintenance of on-site plant and equipment.
- Incoming HGV loads, which have dust-generating potential, will be covered.
- Speed restrictions for HGVs on site roads.
- Use of a bowser, as and when necessary, to reduce dust on hardstanding areas.
- Material handling systems and site stockpiling of materials shall be designed and laid out to minimise exposure to wind. The double-handling of material will be avoided where possible and drop heights will be minimised during material loading and unloading.

- As part of the facility's Environmental Management System, site staff will conduct routine site inspections, which will include checks to ensure that dust control measures are working effectively and that public roads outside the site are clean.
- Regular dust monitoring to confirm that there is no dust nuisance to neighbours from the site's activities.

### Fire Control

Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during backfilling and recovery operations. Fire extinguishers will be kept at the site office to deal with any localised small-scale fires which might occur.

### Litter Control

The inert nature of the incoming materials is typically not litter-generating.

Small volumes of non-inert waste, which may inadvertently be delivered to the site, mixed with soil and stones, will be segregated and stored in skips at the temporary hardstanding area. This may include materials such as metal, timber, PVC pipes, plastic etc. These materials will be stored in such a manner as to prevent wind-blown litter.

As part of the facility's Environmental Management System, site staff will conduct routine site inspections, which will include checks to ensure that the site is not causing litter issues.

### Traffic Control

Access to the application site can only be gained via access road leading off the existing local road R401 and main site entrance. All vehicular traffic accessing the site must stop at a security barrier in front of the temporary site office before gaining access.

For the purpose of the proposed activity, incoming loads will be recorded at the weighbridge and requisite details will be recorded, including the source of the material, haulier and Waste Collection Permit details, time and date, weight in/out.

Aside from the access road to the existing facility, the entire site boundary is closed off by post and wire fences and agricultural field gates. All gates will remain padlocked for the duration of the site restoration activities.

The existing planning permission provides for up to 50 truck movements in and out of the site each day. No further increase in traffic levels, over and above this level, is envisaged in future years.

Opening hours/waste acceptance hours will be controlled, as detailed in Attachment C.3.

Internally within the application site, warning notices, direction signs and speed restriction signs will be established along paved and/or unpaved roads.

All egressing site traffic will be required to pass through the wheel-wash.



**Vermin Control**

Due to the inert nature of incoming materials, vermin control is not anticipated as being required.

**Road Cleansing**

In order to prevent the movement of soil off-site, onto public roads, a wheel-wash facility is installed close to the site entrance; the wheel-wash will be maintained. All egressing site traffic will be required to pass through the wheel-wash.

As part of the facility's Environmental Management System, site staff will conduct routine site inspections, which will include checks to confirm that roads outside the facility are not being negatively impacted by the operation of the facility.

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## SECTION F: CONTROL AND MONITORING

### ATTACHMENT F.1: Treatment, Abatement and Control Systems

Treatment/abatement/control systems are considered below. Emissions to groundwater, sewer and atmosphere are considered non-applicable, as Attachment E.

#### Dust abatement/control

A wheel-wash, positioned at the site entrance, will prevent off-site movement of muck/dust onto public road network.

Additional dust control operational methods are detailed in Attachment E.6.

#### Surface water abatement/control

A surface water collection system (to underground, double-skinned tanks) is proposed at the waste inspection/quarantine area.

The temporary waste inspection and quarantine area, will be sealed by a 100mm thick reinforced concrete slab over 150mm of granular sub-base and banded to a design storm volume. Surface water running over the surface of the concrete slab will be directed toward buried storage tanks with double-skin protection, located on the western side of the hardstanding area. Any wastewater collected in the buried tanks will be emptied by licensed waste collectors and transferred to a collection tanker for disposal off-site at an approved wastewater treatment facility.

Surface water will only be collected in the buried tanks when suspect waste consignments are stored at the quarantine facility. At all other times, surface water run-off from the sealed slab will either percolate directly through the ground to the underlying groundwater table or will be directed over the existing ground surface to ponds in low lying areas, at which point it is effectively discharged to groundwater.

Monitoring of the volume of contents in the underground tanks will be routinely completed as part of the facility's Environmental Management System.

Additional measures/procedures to mitigate against potential groundwater/surface water impacts are detailed in Attachment E.2.

#### Noise abatement/control

As per Attachment E.5, noise emissions will be associated with incoming/outgoing HGVs and mobile quarry/restoration plant and machinery.

Noise associated with incoming/outgoing HGVs and mobile quarry/restoration plant and machinery will be controlled as follows:

- The existing planning permission provides for up to 50 truck movements in and out of the site each day. No further increase in traffic levels, over and above this level, is envisaged in future years.
- Opening hours/waste acceptance hours will be controlled, as detailed in Attachment C.3.

- Internally within the application site, warning notices, direction signs and speed restriction signs will be established along site roads leading, which will reduce traffic speed and noise.
- Maintenance and good housekeeping at site roads and hardstanding areas.
- Acoustic screening, as necessary, including the topography of the site and existing embankments/berms.
- The use of conventional audible reversing alarms may cause problems and alternatives are available. Audible reversing warning systems on mobile plant and vehicles should be of a type which, whilst ensuring that they give proper warning, have a minimum noise impact on persons outside sites.
- Regular and routine servicing and maintenance of plant.
- Staff training and supervision to keep site noise to a minimum. Good practice includes:
  - the proper use and maintenance of tools and equipment;
  - the positioning of machinery on site to reduce the emission of noise to the neighbourhood and to site personnel;
  - the avoidance of unnecessary noise when carrying out manual operations and when operating plant and equipment;
  - avoid unnecessary revving of engines and switch off equipment when not required.

### Fire abatement/control

Given the lack of combustible waste materials at this site, it is considered highly unlikely that a fire will break out during backfilling and recovery operations. Fire extinguishers will be kept at the site office to deal with any localised small-scale fires which might occur.

### Soil storage procedures

The EIS for the proposed development proposes measures for good soil handling, as follows:

- Storage of soils within perimeter security / screening embankment of the site. This is to allow the vegetation of these screening embankments as soon as possible.
- Placement of soils directly on completed sections of the quarry face as part of the final quarry face restoration.
- Placement of soils within designated soils and subsoils storage areas. Subsoil material will be placed first and then covered with topsoil. When the mounds have been completed, they will be graded and blended with the existing topography. Vegetation of these mounds will begin as quickly as possible to reduce any erosional effects and to facilitate the transformation into an amenity area.
- Within soil stripping areas, topsoil will be stripped with back-actors (excavators) and dumper trucks working from the haulage track.
- For the replacement of subsoil and topsoil, the machinery will work from the haulage track or the exposed subsoil surface and away from the reinstated part of the site.

- Soils will not be handled in wet weather conditions. This decision will be made by experienced personnel.
- Soils will not be stripped or placed when the moisture content is high, i.e. after heavy rainfall. This decision will be made by experienced personnel.
- Soils will not be moved in unusually dry and windy weather conditions.
- All temporary storage mounds will have slope angles not greater than 1:1.5 and will be re-vegetated as quickly as possible to avoid soil erosion by air and water.
- Topsoil shall be stored to a height not exceeding 3 metres to preserve organic constituents.

**ATTACHMENT F.2: Air Monitoring**

Proposed dust monitoring locations are shown on **Drawing 151324-WLA-10**, and listed in **Table F.2.1** below.

**Table F.2.1: Proposed Dust Monitoring Locations**

<b>Monitoring Point Ref.</b>	<b>Grid ref.</b>	<b>Description</b>	<b>Monitoring frequency</b>
DM1	269961, 217397	Southern site boundary, at entrance	Biannually (May-Sep.)
DM2	269758, 217606	Western site boundary	Biannually (May-Sep.)
DM3	270067, 217733	North-eastern site boundary	Biannually (May-Sep.)
DM4	270049, 217598	Eastern site boundary	Biannually (May-Sep.)

**ATTACHMENT F.3: Surface Water Monitoring**

No monitoring of surface water is proposed. There are no emissions to surface water. The nearest river/stream is greater than 2km from the site: a small, unnamed stream approximately 2.3 km to the west of the site, which flows northwards discharging to the River Slate; and the River Slate, approximately 3km north of the site.

**ATTACHMENT F.4: Sewer Discharge**

There are no emissions to sewer; therefore, no monitoring is proposed.

**ATTACHMENT F.5: Groundwater**

Proposed groundwater monitoring locations are shown on **Drawing 151324-WLA-10**, and listed in **Table F.5.1** below.



**Table F.5.1: Proposed Groundwater Monitoring Locations**

Monitoring Point Ref.	Grid ref.	Description	Monitoring frequency
BH-1	269929, 217325	Southern site boundary, at entrance	Biannually
BH-2	269804, 217678	Western site boundary	Biannually
BH-3	269816, 217880	Northern site boundary	Biannually

Additional measures/procedures to mitigate against potential groundwater impacts are detailed in Attachment E.2.

**ATTACHMENT F.6: Noise**

Noise monitoring is proposed at the closest Noise Sensitive Receptors (NSRs) to the site (as per the EIS). Proposed noise monitoring locations are shown on **Drawing 151324-WLA-10**, and listed in **Table F.6.1** below.

**Table F.6.1: Proposed Noise Monitoring Locations**

Monitoring Point Ref.	Grid ref.	Description	Monitoring frequency
NSR1	269731, 217609	Neighbouring property to west of site	Annually
NSR2	269620, 217687	Neighbouring property to west of site	Annually
NSR3	269521, 217821	Neighbouring property to north-west of site	Annually
NSR4	269924, 217222	Neighbouring property to south of site	Annually

**ATTACHMENT F.7: Meteorological Data**

No monitoring of meteorological data is proposed. Site staff will be cognisant of weather conditions in terms of site operations and potential nuisances, e.g. mud, dust, wind.

## SECTION G: RESOURCE USE AND ENERGY EFFICIENCY

### ATTACHMENT G.1: Raw Materials, Substances, Preparations and Energy

#### Waste/Materials

Input materials for site restoration will be as described in Attachment H.1.

Any small amounts of non-inert material, which may be separated from incoming material, e.g. timber, plastic, metals, will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

Small volumes of municipal-type office waste generated by on-site staff will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

#### Electricity and Water

Electric power, lighting and heating are provided at the temporary site office near the entrance to the application site.

Mains water is available on site and can be used for any basic sanitary functions.

Records of electricity and water usage will be retained.

#### Fuel and Oil Storage

It is not intended to provide bunded fuel storage tanks at the application site. Fuel for plant and equipment will be stored in double-skinned bowzers located on the hardstanding area. The effect of the double skin is to minimise the potential for fuel spillage on account of leakage/accidental piercing of bowser.

No re-fuelling of HGV trucks will take place on site.

A small bunded tank for waste oils will be provided on the concrete slab at the waste quarantine area. This tank will be emptied at intervals by a licensed waste contractor and disposed off-site at a suitably licensed waste facility.

Oil and lubricant changes for wheeled or tracked plant will be undertaken on-site at the existing hardstanding area.

Records of fuel usage and waste oil removal off-site will be retained.

### ATTACHMENT G.2: Energy Efficiency

Energy will be used at the site in the form of diesel for plant and equipment; and electricity in the site office.

Plant and equipment will be maintained and serviced to achieve optimum fuel efficiency.

Basic measures will be taken to control electricity use in the site office, e.g. turning off lights and equipment when appropriate; energy-saving lighting.

## SECTION H: MATERIALS HANDLING

### ATTACHMENT H.1: Waste Types and Quantities – Existing and Proposed

The void capacity of the site is approximately 1,500,000m<sup>3</sup>.

A volume-to-weight conversion factor 1.5 tonnes/m<sup>3</sup> has been applied (as EPA guidance<sup>1</sup>). The lifetime tonnage of the facility is therefore estimated as 2,250,000 tonnes.

The site has a proposed 10-year operating lifetime, i.e. the restoration timeframe is 10 years. The proposed tonnes per annum input is therefore 225,000 tonnes.

The proposed restoration project requires the importation of inert materials to restore the quarry void. Only clean, uncontaminated soil and stones (EWC code 17 05 04) will be used for restoration of the quarry void. Other proposed input materials (as **Table H.1.1**) – concrete, bricks, tiles/ceramics, granular fill – will be used, as appropriate, in the construction of site haul roads. Proposed European Waste Catalogue (EWC) codes are outlined in **Table H.1.1** below.

It is also proposed that the facility may accept inert materials which have been subject to pre-treatment off-site, e.g. concrete crushed off-site at an authorised facility. Certain Chapter 19 EWC codes may therefore apply, as **Table H.1.1**.

The Applicant may, in the future, seek agreement from the Agency for other compatible and inert material inputs.

**Table H.1.1: Proposed EWC Codes**

EWC Code	Description
17 01 01	Concrete
17 01 02	Bricks
17 01 03	Tiles and Ceramics
17 01 07	Mixture of concrete Bricks, tiles and Ceramics other than those mentioned in 170601
17 05 04	Soil and Stone
19 12 09	Minerals (for example sand, stones)

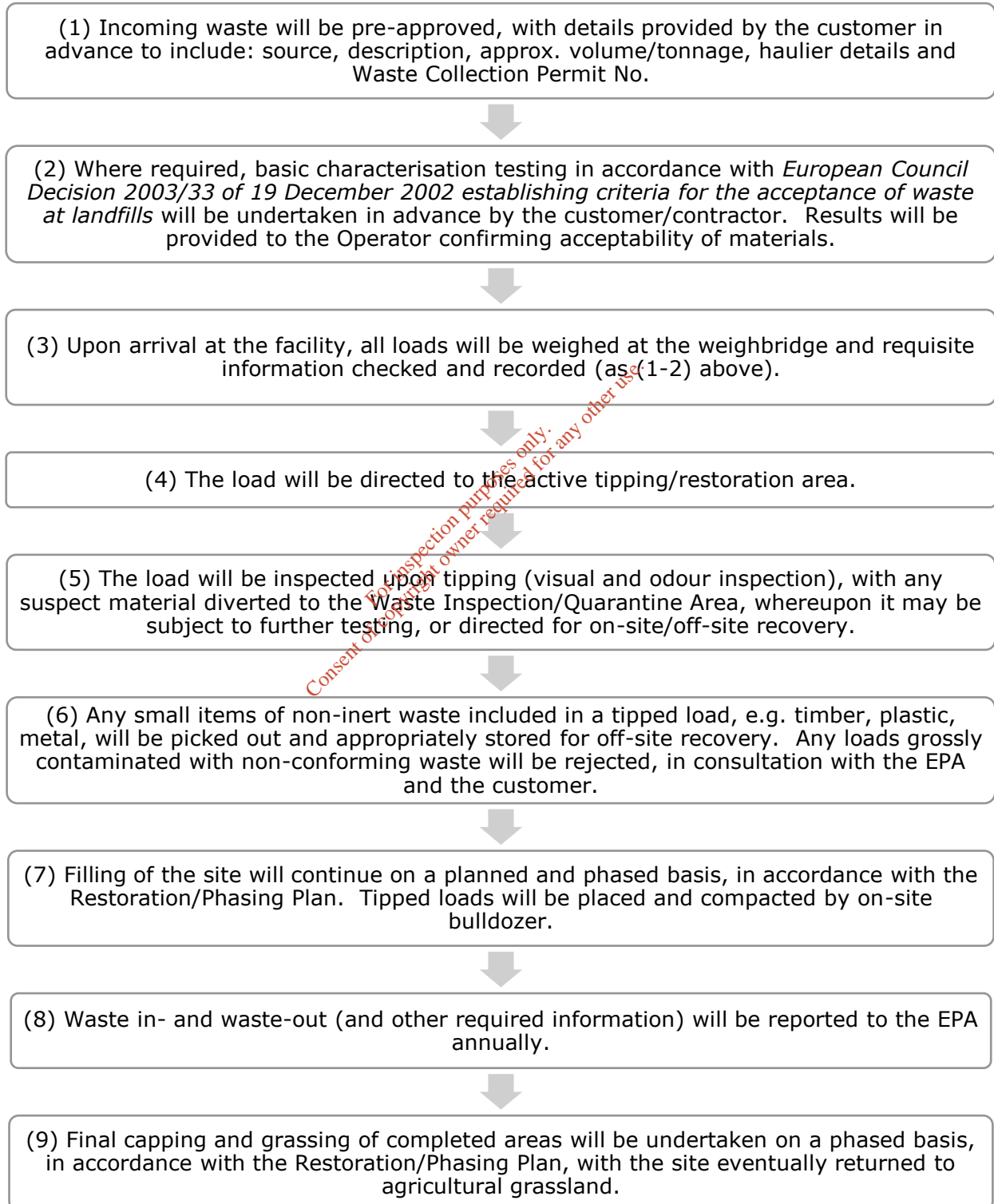
It is estimated that approximately 95% of incoming materials will be recovered on site for the purpose of restoring a worked-out quarry. Any small amount of non-inert construction and demolition waste unintentionally imported to site will be separated, prior to removal off-site to authorised facilities. Wastes removed off-site will be recovered, insofar as possible.

Proposed site haul roads and required volumes of material are outlined on **Drawing 151324-WLA-11**.

<sup>1</sup> EPA (2010) *Waste Licensing Application Guidance Notes for Waste Soils\* Recovery Facilities*

**ATTACHMENT H.2: Waste Acceptance Procedures**

An outline Waste Acceptance Procedure is provided in **Figure H.2.1** below. The procedure will be detailed further post-licensing, as part of the Operator's Environmental Management System.

**Figure H.2.1: Outline Waste Acceptance Procedure**



**ATTACHMENT H.3: Waste Handling**

After weigh-in, incoming materials will be tipped directly by HGV at the active restoration area, or at the recovery/inspection area.

The critical item of plant on site will be 1 No. tracked bulldozer. It is anticipated that a JCB loader will also be employed on site.

The bulldozer will 'push in' a tipped load, level it and compact it at the active restoration area.

In relation to final cover material, stockpiled or delivered subsoil and topsoil will be tipped, levelled and prepared for grassing.

Should small items of non-conforming material (e.g. timber, plastic, metal) be delivered in an incoming load, they will be picked out, by hand, and stored in skips at the recovery area, pending off-site removal to an appropriately authorised facility.

**ATTACHMENT H.4: Waste Arisings**

Any small amounts of non-inert material, which may be separated from incoming material, e.g. timber, plastic, metals, will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

Small volumes of municipal-type office waste generated by on-site staff will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

Waste collectors or destination facilities have not yet been assigned. Only registered Waste Collection Permit-holders will be engaged, who hold the relevant permissions for collections in Co. Kildare, and are permitted for appropriate EWC codes and destination facilities. In relation to off-site facilities for disposal/recovery, these facilities will be appropriately licensed/permitted by the EPA/Local Authority.

**ATTACHMENT H.5: Waste Recycling and Recovery**

The proposed restoration of the quarry is regarded as a recovery operation.

Any non-inert waste separated from incoming loads will be recovered (off-site) insofar as practicable. Waste oils generated on site will be recovered (off-site). Office and on-site waste will be segregated for (off-site) recycling.

No hazardous waste will be accepted at the facility.

## SECTION I: EXISTING ENVIRONMENT AND IMPACT OF THE FACILITY

### ATTACHMENT I.1: Assessment of atmospheric emissions

As part of an Environmental Impact Statement (EIS) (find attached) for the proposed development, Odour Monitoring Ireland was commissioned to perform an air quality survey to assess the potential impact to air quality from the proposed development.

The study concluded: *"A baseline ambient air quality survey was carried out in the vicinity of the proposed Boherkill Quarry facility development located in Boherkill, Rathangan, Co. Kildare. Currently, the air quality is average to good with levels of criteria pollutants for traffic, industrial and residential derived pollution (BTEX, NO<sub>2</sub>, CO, and PM<sub>10</sub>) below the relevant Irish and European Union limits. The main source of air pollution in the area is from motor vehicle exhausts, construction and industrial activities, heating and associated urban and farming emissions. There is the risk that emissions from dust from the facility could result in air quality impacts and nuisance in the vicinity of the existing and proposed facility development during the construction and operation phase. A series of mitigation measures will be maintained and applied to minimise any impact associated with dust. It is anticipated that no long-term associated impacts on air quality will occur in the area as a result of the proposed facility development."*

It can be concluded that emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to the atmosphere are not likely to impair the environment.

Mitigation measures identified in the EIS (if any), have been carried forward to the Waste Licence Application (primarily Sections E and F).

### ATTACHMENT I.2: Assessment of Impact on Receiving Surface Water

As part of an Environmental Impact Statement (EIS) (find attached) for the proposed development, IE Consulting were engaged to assess hydrogeological impacts relating to the proposed development.

The study concluded: *"There are no surface water bodies directly connected to the proposed site area. The proposed development will not discharge directly to any water bodies and will therefore have no significant impact on the water quality or hydrology of the surrounding area. The evidence to date indicates that the groundwater level is deep in this area (> 18 m bgl). It is recommended that groundwater monitoring is commenced for the duration of the restoration works and for a short aftercare period. Any potential and existing risks to groundwater and surface water from the proposed restoration works in this location will be minimised/ prevented through the adherence to the proposed mitigation measures"*.

It can be concluded that emissions of main polluting substances (as defined in the Schedule of S.I. 394 of 2004) to water are not likely to impair the environment.

Mitigation measures identified in the EIS (if any), have been carried forward to the Waste Licence Application (primarily Sections E and F).

**ATTACHMENT I.3: Assessment of Impact of Sewage Discharge**

No discharge to sewer is proposed.

**ATTACHMENT I.4: Assessment of impact of ground/groundwater emissions**

As part of an Environmental Impact Statement (EIS) (find attached) for the proposed development, IE Consulting were engaged to assess the geological and hydrogeological impacts relating to the proposed development (see also Attachment I.2 re. hydrogeology).

The study concluded: *"Any potential and existing risks to soils and geology from the proposed restoration works in this location will be minimised/prevented through the adherence to the proposed mitigation measures"*.

*"There are no surface water bodies directly connected to the proposed site area. The proposed development will not discharge directly to any water bodies and will therefore have no significant impact on the water quality or hydrology of the surrounding area. The evidence to date indicates that the groundwater level is deep in this area (> 18 m bgl). It is recommended that groundwater monitoring is commenced for the duration of the restoration works and for a short aftercare period. Any potential and existing risks to groundwater and surface water from the proposed restoration works in this location will be minimised/ prevented through the adherence to the proposed mitigation measures"*.

Mitigation measures identified in the EIS (if any) have been carried forward to the Waste Licence Application (primarily Sections E and F).

Further information re. hydrogeological assessment was submitted as part of the planning application (IE Consulting, October 2016), and is attached herewith. This report concluded: *"Any potential and existing risks to groundwater, downgradient wells and surface water from the proposed restoration works will be minimised/ prevented through the adherence to the proposed mitigation measures detailed in Section 11. The site is located outside the delineated ZOC to the Monasterevin/Rathangan well field and therefore no impact is predicted on the public supply wells. Provided the appropriate mitigation measures are undertaken, it is considered that the proposed backfilling of the quarry void using inert C&D waste will have no significant impact on groundwater or surface water in the area."*

**ATTACHMENT I.5: Ground and/or groundwater contamination**

There is no known ground and/or groundwater contamination, historical or current, on or under the site.

See also Attachment I.2 re. hydrogeology.

**ATTACHMENT I.6: Noise Impact**

As part of an Environmental Impact Statement (EIS) (find attached) for the proposed development, Fitzsimons Walsh Environmental Limited was retained to undertake a noise impact assessment of the proposed development.

The study concluded:

- *"It has been determined that the site of the proposed development is not by definition an "Area of Low Background Noise".*
- *The proposed development will result in a reduced traffic volume and therefore the resultant noise levels will be lower than currently.*
  - *The site of the proposed development is located along the busy R401 Kildare road. Road traffic is the dominant factor on existing ambient noise levels in the area.*
  - *Noise impacts from road traffic will therefore be negligible.*
- *During normal operation of the facility there should be a negligible noise impact at all nearby residents.*
- *Noise emissions should contain no clearly audible tones and should not be impulsive in nature.*
- *Predicted noise emissions should be well within recommended criteria levels if mitigation measures are implemented."*

Mitigation measures identified in the EIS (if any), have been carried forward to the Waste Licence Application (primarily Sections E and F).

Further information re. noise impact assessment was submitted as part of the planning application (Fitzsimons Walsh Environmental Limited, September 2016), and is attached herewith. This report concluded: *"The further information asked that additional baseline noise monitoring be undertaken. Additional monitoring has been undertaken at two additional locations, one location north and one location east of the site. The results confirm the finding of the original survey....The original impacts assessment and the further information herewith have demonstrated that:*

- *During normal operation of the facility there should be a negligible noise impact at all nearby residents.*
- *Noise emissions should contain no clearly audible tones and should not be impulsive in nature.*
- *Predicted noise emissions should be well within recommended criteria levels if mitigation measures are implemented."*

#### **ATTACHMENT I.7: Assessment of Ecological Impacts & Mitigation Measures**

Mr Roger Goodwillie was commissioned to complete an ecology report and Appropriate Assessment (AA) Screening (full reports attached) for the proposed development.

The ecology report concluded: *"The impact of inert waste disposal on this site will be considerable in local terms but will resemble the extraction process in the habitats it creates. It will not result in any loss of heritage values in the locality or, more widely, in the Natura 2000 network of protected sites. The simultaneous small scale extraction will have no significant ecological effect except that it may give temporary nesting sites for sand martins."*

AA Screening concluded: *"The project can be operated and completed without significant effects on any SAC or its conservation objectives provided the measures to prevent sediment loss and to protect the groundwater remain in operation. This being so there is no possibility of cumulative effects and a Natura Impact Statement is not necessary. In*



*addition, there will be no effect on the proposed NHAs in the area – the Grand Canal (Site Code 2104) and the Curragh Site Code 0392)".*

Further information re. ecological impact assessment was submitted as part of the planning application (Roger Goodwillie, September 2016), and is attached herewith. The further information related to: a) a detailed habitat map; b) a breeding bird survey, particularly of birds of conservation concern; and c) bio-security measures necessary to prevent the establishment of invasive species.

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## SECTION J: ACCIDENT PREVENTION AND EMERGENCY RESPONSE

### Fuel Storage

It is not intended to provide bunded fuel storage tanks at the application site. Fuel for plant and equipment will be stored in double-skinned bowzers located on the hardstanding area. The effect of the double skin is to minimise the potential for fuel spillage on account of leakage/accidental piercing of bowser.

A small bunded tank for waste oils will be provided on the concrete slab at the waste quarantine area. This tank will be emptied at intervals by a licensed waste contractor and disposed off-site at a suitably licensed waste facility.

No re-fuelling of HGV trucks will take place on site.

Oil and lubricant changes for wheeled or tracked plant will be undertaken on-site at the existing hardstanding area.

### Spillage Emergencies

Dedicated sand piles and/or spill kit(s) will be retained on site to contain and absorb hazardous liquid material in the event of a leak or accidental spillage from plant/equipment. Used absorbent material will be disposed of as hazardous material, using appropriately licensed collectors and disposal/recovery facilities.

### Out-of-Hours Response

The facility notice board (to be positioned at the site entrance) will include contact details, including out-of-hours contact information, for the operator/nominated individual, who can respond to potential emergency situations.

### Abnormal Operating Conditions

Abnormal operating conditions at the facility could involve the malfunction of one of two critical plant items, i.e. the weighbridge or the bulldozer.

In the event of malfunction of the weighbridge, a service contractor will be available for repair call-outs on a short-notice basis. It is possible that weights of loads could be read and recorded manually, or in an extreme event, averaged weights could be applied for a given HGV, based on previous records from a given source site.

In the event of breakdown of the bulldozer, restoration materials could be tipped and temporarily stockpiled at the active restoration area. A mechanic will be available to the facility for repairs on a short-notice basis. A hired, replacement bulldozer will be acquired, if necessary.


### Emergency Response Procedure

An Emergency Response Procedure will be documented and maintained as part of the facility's Environmental Management System.

**Insurances**

A copy of the company's Public Liability insurance certificate is attached.

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<p><i>Attached overleaf:</i></p> <ul style="list-style-type: none"><li>▪ PL insurance certificate</li></ul>	
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# *Combined Liability*

## *Summary of Cover 2016 / 2017*

**Name:** Kildare Sand & Gravel Limited

**Postal Address:** "Hazelwood House"  
Curryhills, Prosperous  
Naas, Co Kildare

**Risk Address:** (1) Boherkill, Rathangan, Co Kildare  
(2) Balrinnet, Carbury, Co Kildare  
(3) Collinstown, Carbury, Co. Kildare

**Business Description:** Sand Pit Operator

**Insurer:** Citynet Insurance

**Policy No:** TBA

**Period of Cover:** 28<sup>th</sup> January 2016 to 27<sup>th</sup> January 2017

**Sections Covered:** Employers Liability  
Public / Products Liability

**Broker:** Wexford Insurances  
86 South Main Street  
Wexford

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# Employers Liability

**Cover:** Legal Liability to pay compensation to employees as a result of accidents arising in connection with their employment.

<b>Wages Projections:</b>	<u>2015 / 2016</u>	<u>2016 / 2017</u>
Clerical	€62,120	*€35,000
Drivers	€41,000	€30,000
All Others	€45,000	€30,000
	* incl Clerical Directors	

# Public / Products Liability

**Cover:** Legal Liability in respect of accidental bodily injury / illness to any person or accidental damage to Third Party property arising out of the course of the business described in this schedule.

<b>Turnover Projections:</b>	<u>2015 / 2016</u>	<u>2016 / 2017</u>
	€350,000	€350,000

**Limit of Indemnity:** Public / Products Liability €6,500,000

**Excess:** €3,000 Each and every claim.

Pyrite Exclusion on Policy

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## SECTION K: REMEDIATION, DECOMMISSIONING, RESTORATION AND AFTERCARE

### Closure, Restoration and Aftercare Management Plan

#### 1. INTRODUCTION

##### Site Description

The site is a proposed restoration of a sand and gravel quarry located at Boherkill, Rathangan, Co. Kildare. The quarry has been operational for the past 13 years. The primary aim of the proposal is to bring soil and stone (for quarry backfill) and associated other inert materials (for the construction of haul roads) to the site over a 10-year period to ultimately bring the site back to its previous agricultural use.

##### Activities

Proposed classes of waste activity are R 5 (principal), "Recycling/reclamation of other inorganic materials, which includes soil cleaning resulting in recovery of the soil and recycling of inorganic construction materials".

Other proposed ('non-principal') waste activities are: R 3, R 4, R10, R 12, R13 and R 15.

See Attachment B.7 for details.

##### Licence/permit details

Not yet licensed; Waste Licence Application stage.

#### 2. SITE EVALUATION

##### Operator performance

No licensing/permitting history. The quarry has been operated for the past 13 years under the operational stewardship of Kildare Sand & Gravel Limited. The facility has operated in full compliance with the existing planning permissions and has never had any issues regarding the management of the quarry from regulatory or locally concerned stakeholders within the lifetime of the facility.

##### Environmental pathways and sensitivity

The pathways into the groundwater and surface water and the likelihood of the occurrence of potential groundwater contamination associated with a particular pathway, are presented in **Table K.1.1** below<sup>2</sup>.

<sup>2</sup> Source: IE Consulting (2016) *EIS for Restoration of Sand and Gravel Quarry at Boherkill, Rathangan, Co Kildare*

**Table K.1.1: Possible Site Pathways**

Pathway	Description
Infiltration through quarry floor	<ul style="list-style-type: none"> <li>▪ Infiltration of rainfall in quarry excavation area through subsoils.</li> <li>▪ Infiltration of rainfall through backfilled area.</li> <li>▪ Infiltration of rainfall through underlying bedrock.</li> <li>▪ Infiltration to ground after water has passed through the silt lagoon.</li> </ul>
Surface water drainage	<ul style="list-style-type: none"> <li>▪ After surface water has passed through the lagoon, surface water run-off from the site overflows to the natural sump and percolates to ground.</li> <li>▪ Runoff from compacted hardcore areas.</li> <li>▪ Runoff from the site wheel-wash.</li> <li>▪ Runoff from stockpiled topsoil material.</li> <li>▪ Through backfilled material into sub-surface drainage system.</li> </ul>

The nearest river/stream is greater than 2km from the site: a small, unnamed stream approximately 2.3 km to the west of the site, which flows northwards discharging to the River Slate; and the River Slate, approximately 3km north of the site.

Hydrogeological conditions are identified as follows<sup>3</sup>:

- Hydrogeological setting: 2.ii, High permeability subsoils, sands and gravels overlain by well drained soils
- Soil drainage: dry
- Subsoil type: GLPSsS, Glaciofluvial sands and gravels
- Subsoil permeability: H, High
- GW Vulnerability: H, High
- Aquifer Category: LI, Locally Important Aquifer – Bedrock which is moderately productive only in local zones

### Site processes and activities

The proposed restoration scheme at the site provides for:

- Use/recovery of imported inert soil & stones to backfill and restore a large existing void created by previous extraction of sand and gravel.
- Use/recovery of imported other inert material, e.g. concrete, bricks, tiles, ceramics, for the construction of site haul roads.
- Separation and quarantine of any non-inert construction and demolition waste (principally metal, timber, PVC pipes and plastic) unintentionally imported to site

<sup>3</sup> Source: IE Consulting (2016) *EIS for Restoration of Sand and Gravel Quarry at Boherkill, Rathangan, Co Kildare*

prior to removal off-site to appropriately licensed waste disposal or recovery facilities.

- Continued excavation on a limited basis of the residual resource of sand and gravel remaining in the quarry. Export of sand and gravel off-site for use by others.
- Phased restoration of the backfilled void (including placement of cover soils and seeding) and return to former use as agricultural grassland.
- Temporary stockpiling of topsoil and subsoil pending re-use as cover material for phased restoration of the site.
- Environmental monitoring of noise, dust and groundwater for the duration of the site restoration works.

### **Inventory of buildings, plant and equipment**

Site buildings are as follows:

- Temporary site office at site entrance (also serves as weighbridge office and staff mess area) (existing)
- Temporary staff office adjacent site entrance (existing)

Plant and equipment are as follows:

- Weighbridge (existing, but to be replaced)
- Wheel-wash (existing)
- Bulldozer and/or mechanical excavator
- Quarry plant, including screen, washing plant (existing)
- Portaloo (existing) – to be replaced by wastewater holding tank for site toilets
- Underground surface water storage tanks at quarantine area (proposed)
- Small bunded tank for waste oils on the concrete slab at quarantine area (proposed)

### **Inventory of raw materials, products and wastes**

The proposed restoration project requires the importation of inert materials to restore the quarry void. Proposed European Waste Catalogue (EWC) codes are outlined in Attachment H.1.

Any small amounts of non-inert material, which may be separated from incoming material, e.g. timber, plastic, metals, will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

Small volumes of municipal-type office waste generated by on-site staff will be appropriately stored and removed off-site to an authorised waste facility. Records of waste volumes/weight will be retained.

Remaining sand and gravel deposits will be removed off-site; records of volumes/weight will be retained.



**Maximum storage capacity for raw materials, products and wastes**

Input materials will be placed directly in the active restoration area.

There may be stockpiling of subsoil/topsoil for capping purposes.

Storage times for waste will be minimal, e.g. when a skip is filled it will be collected and an empty skip dropped off. Office-type waste will be collected on a routine collection round, or when bins are full.

**3. CLOSURE TASKS AND PROGRAMMES**

**Plant and equipment decontamination requirements**

The following plant will be emptied by a competent contractor:

- Wastewater holding tank for site toilets
- Underground surface water storage tanks at quarantine area
- Small bunded tank for waste oils on the concrete slab at quarantine area

Fuel will be drained from mobile plant/machinery.

**Plant and equipment decommissioning requirements**

The temporary site office and temporary staff office buildings will be removed off-site.

Mobile plant will be removed off-site.

The weighbridge and wheel-wash will be decommissioned and removed off-site.

The following plant will be removed off-site:

- Wastewater holding tank for site toilets
- Underground surface water storage tanks at quarantine area
- Small bunded tank for waste oils on the concrete slab at quarantine area

**Demolition (if necessary)**

No demolition works required.

**Waste facility closure (e.g. landfill and extractive waste facilities)**

The proposed development will use imported inert materials to backfill and restore a large existing void created by previous extraction of sand and gravel.

**Raw materials, products and waste disposal and/or recovery requirements**

Any small amounts of non-inert material, which may be separated from incoming material, e.g. timber, plastic, metals, as well as small volumes of municipal-type office

waste generated by on-site staff, can be diverted to one of many authorised waste facilities for recovery or disposal, as appropriate.

#### **Contaminated land treatment, removal and/or disposal**

No requirement for contaminated land treatment, removal and/or disposal.

#### **Programme (Gantt chart or similar) and timeframes for delivery**

To be considered at post-licensing stage.

### **4. RESTORATION TASKS AND PROGRAMME**

Backfilling of the application site will proceed on a phased basis. A summary of the proposed phasing and the final ground level contours are shown in **Drawing 151324-WLA-06** and **Drawing 151324-WLA-07**.

The restoration of the site will result in a landform similar to that which existed prior to extraction of sand and gravel. The restored site will merge into the surrounding undulating pastoral landscape.

The proposal is to commence the restoration project at the northern boundary of the site and progress southwards year by year.

A cover layer comprising 150mm of topsoil and approximately 850mm of subsoil shall be placed over the inert backfilled materials on completion of each phase of restoration. This will be immediately planted with grass in order to promote stability and minimise soil erosion and dust generation. The lands will then be progressively returned to use as agricultural land.

In the course of the tenth (and final) phase of the site restoration works, all mobile plant and equipment will be removed off site and any temporary site accommodation, infrastructure and services will be progressively removed off-site or decommissioned.

On completion, the final landform will be profiled to give a very slightly domed shape in order to facilitate surface water run-off into the *in-situ* sand and gravels along the site boundary; refer to final site contour map in **Drawing 151324-WLA-07**.

### **5. AFTERCARE TASKS AND PROGRAMME**

A reduced programme of environmental monitoring (versus licensed monitoring requirements) is anticipated for a short-term aftercare period, e.g. 3 to 5 years. Trusting that no issues/concerns arise as the result of the aftercare monitoring programme, it is proposed that environmental monitoring would cease after this short-term aftercare period.

The site will be inspected by a competent engineer approximately one year post-closure to confirm that restoration conditions are acceptable in terms of settlement, drainage and overall landform.

It is anticipated that the restored site will be returned to agricultural use, and day-to-day management in terms of access, boundaries, landscape maintenance, etc. will be overseen by the farmer/manager.

## **6. CRITERIA FOR SUCCESSFUL CLOSURE, RESTORATION AND AFTERCARE**

### **A benchmark set of criteria to evaluate the success of closure, restoration and aftercare**

The following criteria will be applied to evaluate the success of closure, restoration and aftercare:

- The site has been fully restored, in accordance with requirements of planning and licensing. Final capping and grassing has been completed and the site has been returned to agricultural grassland.
- All mobile plant and equipment, and temporary site accommodation units have been removed off-site.
- Environmental monitoring has concluded that there are no residual issues.
- Any required post-restoration infrastructure remains in place, e.g. certain monitoring points to be agreed with the Agency.
- A closure validation report has been completed by a competent person.
- The EPA licence has been surrendered.

## **5. CLOSURE PLAN VALIDATION**

A full round of environmental monitoring, as required by the licence, will be completed post-closure. Environmental monitoring results must confirm that there are no concerns relating to the site.

A closure validation audit and report will be completed by a competent individual.

The licensee will complete licence surrender procedures in consultation and agreement with the Agency.

## **6. CLOSURE, RESTORATION/AFTERCARE PLAN COSTING**

To be considered at post-licensing stage.

## **7. CLOSURE, RESTORATION/AFTERCARE PLAN REVIEW AND UPDATE**

The Closure, Restoration and Aftercare Plan will be considered and reviewed as part of the Annual Environmental Report.

## SECTION L: STATUTORY REQUIREMENTS

### ATTACHMENT L.1: Section 40(4) WMA

#### Section 40(4) WMA

Section 40(4) of the Waste Management Act 1996, as amended, states that the Agency shall not grant a waste licence unless it is satisfied in relation to the following.

*(a) any emissions from the recovery or disposal activity in question ("the activity concerned") will not result in the contravention of any relevant standard, including any standard for an environmental medium, or any relevant emission limit value, prescribed under any other enactment*

The proposed activity provides for the recovery of clean and inert materials. Input materials will be inspected/tested, as required, to confirm their suitability. There will be no emissions to water. Mitigation measures have proposed, where appropriate, to mitigate against dust and noise emissions. The facility will operate under the requirements of an EPA licence and the facility's Environmental Management System. An environmental monitoring programme will be put in place.

*(b) the activity concerned, carried on in accordance with such conditions as may be attached to the licence, will not cause environmental pollution*

The proposed development has been subject to the preparation of an Environmental Impact Statement. There are no issues surrounding environmental pollution.

*(bb) if the activity concerned involves the landfill of waste, the activity, carried on in accordance with such conditions as may be attached to the licence, will comply with Council Directive 1999/31/EC on the landfill of waste*

Not applicable.

*(c) the best available techniques will be used to prevent or eliminate or, where that is not practicable, to limit, abate or reduce an emission from the activity concerned*

There will be no emissions to water. Mitigation measures have proposed, where appropriate, to mitigate against dust and noise emissions. Due regard was given to the requirements of EPA BAT notes<sup>4</sup> in assigning mitigation measures.

*(cc) the activity concerned is consistent with the objectives of the relevant waste management plan or the hazardous waste management plan, as the case may be, and will not prejudice measures taken or to be taken by the relevant local authority or authorities for the purpose of the implementation of any such plan*

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<sup>4</sup> EPA (2011) BAT Guidance Note on Best Available Techniques for the Waste Sector: Landfill Activities; and EPA (2011) BAT Guidance Note - Waste Sector (Transfer & Materials Recovery)

In relation to Construction & Demolition Waste, the Eastern-Midlands Region Waste Management Plan 2015-2021 states that: "given the sharp decrease in the number of operational landfills nationally, which have been a significant outlet for C&D waste in the past, alternative recovery options will be required to facilitate the recovery of C&D waste arising in future years.....Quarries also frequently require large quantities of soil material to fill voids, and for other remediation and landscaping applications."

*(d) if the applicant is not a local authority, the corporation of a borough that is not a county borough, or the council of an urban district, subject to subsection (8), he or she is a fit and proper person to hold a waste licence*

The Applicant is deemed to be fit and proper, see Attachment L.2.

*(e) the applicant has complied with any requirements under section 53.*

The Applicant is of good financial standing and is in a position to discharge financial commitments or liabilities, as may be required by the Agency.

*(f) energy will be used efficiently in the carrying on of the activity concerned,*

The facility will not be an intensive energy user. Measures will be taken to minimise energy use, as Attachment G.

*(g) any noise from the activity concerned will comply with, or will not result in the contravention of, any regulations under section 106 of the Act of 1992*

A noise assessment was completed as part of the EIS. The EIS concluded that, during normal operation of the facility, there should be a negligible noise impact at all nearby residents. Noise mitigation measures are outlined in the EIS, and considered in Attachment F.1.

*(h) necessary measures will be taken to prevent accidents in the carrying on of the activity concerned and, where an accident occurs, to limit its consequences for the environment*

The proposed activity is deemed to be of low environmental risk. Accident prevention and emergency response measures have been considered in Section J.

*(i) necessary measures will be taken upon the permanent cessation of the activity concerned (including such a cessation resulting from the abandonment of the activity) to avoid any risk of environmental pollution and return the site of the activity to a satisfactory state*

The proposed development addresses the requirement to restore a quarry void. Site restoration will progress on a phased basis, with the site ultimately restored to agricultural grassland. Closure, restoration and aftercare provisions are detailed in Attachment K.



*(j) the intended method of treatment is acceptable from the point of view of environmental protection, in particular when the method is not in accordance with section 32(1).*

Only inert materials will be accepted for the restoration of the site. The facility will operate under the terms of an EPA Waste Licence and the facility's Environmental Management System. The proposed development has been subject to the preparation of an Environmental Impact Statement (attached).

### **Appropriate Assessment**

The proposed development was subject to Appropriate Assessment Screening (Roger Goodwillie & Associates, October 2015; full report attached in EIS). The report concludes: *"The project can be operated and completed without significant effects on any SAC or its conservation objectives provided the measures to prevent sediment loss and to protect the groundwater remain in operation. This being so there is no possibility of cumulative effects and a Natura Impact Statement is not necessary. In addition, there will be no effect on the proposed NHAs in the area – the Grand Canal (Site Code 2104) and the Curragh Site Code 0392)."*

### **Compliance with Best Available Techniques (BAT)**

In considering BAT compliance, consideration was given to Annex IV of Council Directive 96/61/EC concerning integrated pollution prevention and control; BAT Reference Documents (BREFs) and BAT conclusions under Directive 2010/75/EU on industrial emissions (integrated pollution prevention and control); EPA BAT Guidance Note - Waste Sector (Landfill) (2011); and EPA BAT Guidance Note - Waste Sector (Transfer & Materials Recovery) (2011).

The following points in relation to the proposed development are noted:

- The restoration of the quarry is considered a recovery operation, which will have positive benefits in terms of returning the site to pre-quarrying conditions.
- The facility will operate in accordance with the terms of planning permission and EPA Waste Licence. An Environmental Management System will be developed and implemented at the site.
- The activity involves the importation of inert materials only; no hazardous waste will be acceptable.
- The facility offers a licensed and controlled outlet for the C&D waste sector in the area.
- Alternative options for the recovery of waste soil and stones from the C&D sector are limited.
- Small volumes of non-inert waste, which may be delivered to the site, will be appropriately stored on-site, and will be directed for off-site recovery, insofar as practicable.
- The proposed activity is a low-technology, low-risk activity.
- The approach is well proven for the restoration of other quarries/voids, on a national level.
- There will be no emissions to surface water, groundwater or sewer. The activity will not generate landfill gas or leachate.

- Input materials will be non-odorous, and will not be an attraction to scavenging birds nor rodents.
- Potential noise and dust emissions will be controlled via prescribed mitigation measures, which will be incorporated into the site's Environmental Management System.
- Egressing vehicles will pass through a wheel-wash prior to exiting the facility.
- The facility will not be an intensive energy/water-user. Diesel consumption for site plant/equipment and electricity usage at the site office(s) will be monitored and controlled.
- The facility is low-risk in terms of environmental/pollution risk. There will be no fuel storage on site. Emergency response procedures will be incorporated into the site's Environmental Management System.
- A rigorous Waste Acceptance Procedure will be implemented. Input material will be tested, where required, prior to delivery to site.
- All material-in and material-out will be recorded and summary data reported to the Agency as part of Annual Environmental Reporting obligations.
- The facility will be managed by a competent management team, and with due regard for site neighbours.
- An environmental monitoring programme will be implemented, in accordance with licence conditions.
- The site will be progressively restored, on a planned and phased basis, in accordance with the site restoration/phasing plan. Final cover and planting will be applied to completed phases as soon as practicable.
- Financial provision for site closure/environmental liabilities will be put in place by the operator to address EPA requirements.

## ATTACHMENT L.2: Fit and Proper Person

### Convictions

Neither the applicant nor other relevant person has been convicted under the Waste Management Act 1996, as amended, the EPA Act 1992, as amended, the Local Government (Water Pollution) Acts 1977 and 1990 or the Air Pollution Act 1987.

### Technical knowledge/qualifications

The applicant has managed quarrying activities at the application site for over 13 years. There is a good working history with neighbours, and as part of the EIS consultation (ref. EIS, section 1.5), the overwhelming majority of neighbours saw the restoration of the quarry back to agricultural land as a positive progression for the site, and for the area in general.

Additional expertise will be acquired for the purposes of managing a licensed facility. The applicant has retained the services of RME Environmental, a qualified and experienced environmental consultancy in the waste management/site restoration sector. RME Environmental will assist site staff in establishing the facility's Environmental Management System, including practical issues surrounding the Waste Acceptance Procedure, staff training and licence compliance. RME Environmental will

have a presence on site on a weekly basis, for the first six months of operation, as a minimum.

The nominated Facility Manager will attend a recognised training course in waste management, to be agreed with the Agency.

### **Financial commitments/liabilities**

Kildare Sand & Gravel Ltd. is a well-established company, in operation for 17 No. years.

The directors of Kildare Sand & Gravel Ltd. (Mr. Thomas Graham and Mr. Christopher O'Neill) are also directors of Moyglare Sand & Gravel Ltd. and Graham Sand & Gravel Ltd.

Kildare Sand & Gravel Ltd. will be in a position to meet financial commitment/liabilities that may be entered into under the terms of an EPA Waste Licence. See letter from company account attached at the end of Section L (company accounts available upon request).

### **Low risk facility**

The proposed facility is deemed to be low risk, based on the following factors:

- Only inert materials will be accepted at the facility.
- The activity is a restoration activity.
- The activity will not generate leachate, landfill gas or odours.
- No emissions to air are proposed.
- No emissions to water are proposed.
- No emissions to land (i.e. no septic tank/wastewater treatment) are proposed.
- The facility will not generate hazardous waste; only small volumes of incidental non-hazardous waste will be generated, which will be removed off-site to appropriately authorised facilities.
- There is a good working history with neighbours, and as part of the EIS consultation (ref. EIS, section 1.5), the overwhelming majority of neighbours saw the restoration of the quarry back to agricultural land as a positive progression for the site, and for the area in general.
- There are no protected ecological sites proximate to the site.
- The limestone bedrock underlying the site is classified as a Locally Important (LI) aquifer i.e. bedrock which is moderately productive only in local zones.
- Groundwater vulnerability is currently 'extreme'; the proposed backfilling of the quarry can provide an enhanced degree of protection, over and above that which exists at present.
- The site is not in a public supply Source Protection Area.
- There are no surface water features proximate to the site.
- An Environmental Management System will be implemented at the facility.

**ATTACHMENT L.3: Waste Hierarchy**

Section 21(A) of the Waste Management Act states that the following waste hierarchy shall apply as a priority order in waste prevention and management legislation and policy:

- (a) prevention;
- (b) preparing for re-use;
- (c) recycling;
- (d) other recovery (including energy recovery); and
- (e) Disposal.

Proposed site restoration activities are deemed to fall within the 'other recovery' category of the waste hierarchy.

The Applicant has little control over how the material is handled at source. Soil and stones are typically generated in bulk at construction and demolition/development sites, and removal of the material off-site is required. Many architects/developers will design a scheme to minimise the amount of material which is required to be removed off-site, thus preventing the waste stream.

There may be some 'pre-treatment' of certain materials before it is delivered to the proposed site for restoration/recovery. This off-site pre-treatment may include concrete crushing, for example.

Any small amounts of non-inert material delivered to the application site will be removed, appropriately stored, and transferred off-site for recovery/disposal to an appropriately authorised facility. Material will be diverted for recovery, in preference to disposal, insofar as possible.

There are limited options for 'preparing for re-use' and 'recycling' of bulk soil and stones in terms of market conditions in Ireland.

**ATTACHMENT L.4: Principles of self-sufficiency and proximity**

Section 37A of the WMA is concerned more with waste disposal installations and household municipal waste.

It is considered that the proposed facility will service the need for an outlet for Construction & Demolition (C&D) in the region.

C&D waste is a priority waste stream.

The Eastern-Midlands Region (EMR) Waste Management Plan 2015–2021 notes the following:

- *1.9 million tonnes of C&D waste was collected in the EMR in 2012 (2.3 million tonnes in 2010).*
- *As the construction sector begins to record increasing activity during 2014, the importance of C&D plans and their enforcement must be stressed.*
- *Equally, the appropriate processing facilities need to be in place to facilitate increased reuse, recycling and recovery of this waste stream.*

- *...alternative recovery options will be required to facilitate the recovery of C&D waste arising in future years.*
- *Quarries also frequently require large quantities of soil material to fill voids, and for other remediation and landscaping applications.*

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*Attached overleaf:*

- Letter from accountant







BANAHOE SERVICES LIMITED T/A  
**JOHN FITZSIMONS**  
AND COMPANY

FINANCIAL & TAXATION CONSULTANTS

Waste Licensing Section,  
Office of Climate, Licensing & Resource Use,  
Environmental Protection Agency,  
P O Box 3000,  
Johnstown Castle Estate,  
Co. Wexford.

3 Dara Court, Corbans Lane, South Main Street,  
Naas, Co. Kildare.  
Tel.: (045) 897916/879083 Fax: (045) 874294  
Mobile: (086) 2557750  
e-mail: john@johnfitzsimons.ie  
www.johnfitzsimons.ie

21 November 2016

**Re: Waste Licence Application, Kildare Sand & Gravel Limited  
For Waste Licence at Boherkill, Rathangan, Co. Kildare (to restore the quarry)**

To whom it may concern,

We act as accountants to the above named applicant who has been trading for approximately seventeen years. The company has no long-term bank borrowings.

All of the company's taxation, V.A.T. , Corporation Tax and PAYE/PRSI are returned and discharged up to date.

It is our opinion that the applicant is likely to be in the position to meet any financial commitments or liabilities that may have been or will be entered into or incurred in carrying out the activities to which the Waste Licence Application relates, or in consequence of ceasing to carry out that activity.

Yours sincerely,

John Fitzsimons

Accountants to Kildare Sand and Gravel Limited