

## EMISSIONS TO GROUND – CONTROL MEASURES

This waste licence application provides for the importation of inert material for backfilling / recovery purposes at an existing worked out sand and gravel pit.

The site preparation stage principally provides for the delivery, installation and commissioning of the site infrastructure necessary to facilitate the backfilling and restoration activities and future operation of the recovery facility. These activities are of relatively short time duration and must be completed before the importation and recovery of inert soil and stone waste can commence. The operational stage comprises the importation and placement of the inert material at the facility.

There will be minimal, if any, impact on emissions to ground at the site preparation / construction stage. During the operational phase, there is potential for accidental spills or leaks of fuel, hydrocarbons or other hazardous substances being used or stored at the facility to adversely impact land quality.

The potential for any future uncontrolled emissions to ground will be minimised by implementing a series of mitigation measures (outlined in section on control measures below) and by developing and implementing an Environmental Management System (EMS), which will include, amongst other elements, detailed systems and procedures providing for the implementation of the identified mitigation measures and for proper handling, storage, control and monitoring for all potentially hazardous substances at the facility.

As part of the proposed development, site offices and site welfare facilities for staff working at the recovery facility will be established at the site infrastructure area at the existing hardstanding area immediately north of the access road leading into the application site. These will be 'portacabin'-type structures and will comprise a site office / meeting room, a staff changing room, a kitchen / canteen facility and staff toilets. Sewage / waste water from the proposed staff welfare facilities will be discharged to ground via

- (i) a Tricel Novo Package Plant which provides on-site secondary wastewater treatment using submerged aeration filter technology and
- (ii) a Sandcel sand polishing filter to provide tertiary treatment by distributing treated effluent over stratified sand layers.

Experience at this site (during former extractive activities) and at other, similar soil recovery facilities is that management practices can effectively reduce, minimise and prevent any uncontrolled emissions to ground and any potentially adverse implications for land quality or ground contamination.

With the proposed mitigation measures in place, it is considered that any potential impacts on land quality will be imperceptible, refer to Chapter 7 (Water) of the EIAR accompanying this waste licence application. It is considered that the long-term restoration of previously excavated ground at the application site to grassland and/or agricultural use will provide an overall positive and beneficial impact.

### Specific Control Measures (to Give Effect to EU Council Directives)

In order to minimise the risk of pollution to groundwater arising as a result of waste recovery and backfilling activities, a number of mitigation measures will be implemented to protect groundwater, prevent accidental discharge of fuel or chemicals and detect / monitor potential adverse impacts.

These measures, give effect to the requirements of *Council Directive 80/68/EEC of 17 December 1979 on the Protection of Groundwater Against Risk of Pollution by Dangerous Substances* and the requirements of *Directive 2006/118/EC of 12 December 2006 on the protection of groundwater against pollution and deterioration*.

They also give effect to the requirements of the national transposing legislation, specifically the *European Communities Environmental Objectives (Groundwater) Regulations 2010 (S.I. No. 9 of 2010)*. Measures are identified under a range of headings below.

## *Inspection of Imported Material*

Consignments of imported soil and stone waste will be screened and inspected in line with an approved waste acceptance plan to confirm they are inert / acceptable for recovery on land prior to their importation to the facility. Additional precautionary measures associated with the acceptance and handling of inert soil waste are detailed in Attachment 4-8-1 of this application (Operational Report) and Chapter 2 (Project Description) of the Environmental Impact Assessment Report which accompanies this waste licence application.

## *Infiltration of Suspended Solids*

There are potential impacts on groundwater from increased mobilisation of soil fines in infiltrating rainfall / run-off. In order to minimise soil erosion and transportation of fines in groundwater the following measures will be implemented:

- soil stockpiles / surfaces will be graded at a safe angle of repose and will be bladed off;
- soil stockpiles / surfaces will be re-vegetated if they are likely to be in place for an extended period of time; and
- surface water run-off containing suspended solids will be directed towards permeable in-situ soils beyond the working (backfill) areas or to groundwater ponds where it can infiltrate to ground.

## *Fuel Storage / Refuelling*

- fuel storage will be at a dedicated, bunded facility at the site infrastructure area - there will be no fuel stored within the working (backfill) areas;
- refuelling will take place at a designated paved refuelling area;
- no refuelling will take place within working (backfill) areas to avoid any risk of accidental spillages;

## *Plant / Equipment Maintenance*

- plant/machinery maintenance and repairs will take place on the hardstanding area at the refuelling point;
- no servicing or maintenance of mobile plant and machinery will be undertaken at working (backfill) areas;
- all petroleum-based products (lubricating oils, waste oils, etc.) will be stored on drip trays under cover in the storage container to prevent pollution due to accidental leakages;
- a spill kit and drip trays will be kept on site and will be deployed if there is an accidental spillage from plant / machinery;
- plant operators will be briefed during 'toolbox' talks and site induction on where the spill kit is kept and how and when it is deployed;

## *Management of Potential Contaminated Waste*

- any imported waste which is accepted at the facility but subsequently suspected to be non-compliant with waste acceptance criteria for the facility will be re-loaded onto HGV trucks and transferred across the application site to a proposed covered waste inspection and quarantine facility for closer examination and/or testing;

- the waste inspection facility comprises an existing covered shed over a sealed concrete slab;
- incident rainfall will not come into contact with consignments of suspected contaminated waste stored at the covered shed;
- should any subsequent inspection or testing of suspect soil waste at the inspection and quarantine facility identify any non-inert material which cannot be accepted or reused in the restoration of the application site, it will be segregated and temporarily stockpiled (quarantined) pending removal off site by permitted waste collectors to an authorised waste disposal or recovery facility; and
- provision will also be made for temporary storage of any separated non-inert construction and demolition waste (including metal, timber, plastic etc.) in skips prior to removal off site to a licenced recovery facility.

### Traffic Movements

- a site specific traffic management system will be put in place to reduce potential conflicts between HGV's / trucks travelling to and from the recovery facility to reduce the risk of an accidental vehicle collision;
- speed limits will be applied / enforced within the application site to further reduce the likelihood and significance of collisions between vehicles;
- all plant will be regularly maintained and will be inspected daily for leaks of fuels, lubricating oil or other contaminating liquids/liquors.

### Monitoring

- regular groundwater monitoring will be undertaken around the recovery facility / application site in order to monitor any potential impact of the inert waste recovery operations on groundwater quality;
- the results of all groundwater monitoring undertaken will be recorded and submitted to Kildare County Council and/or the EPA in an Annual Environmental Report for their record and review;
- the groundwater monitoring regime will remain in place for the duration of the proposed backfilling and restoration works. Sampling and monitoring will continue as long as backfilling activities continue and for a short period thereafter.