EMP 1 Surface water run-off control

Purpose

To describe measures for the management of all surface water and run-off on the site, for the protection of watercourses and in particular, sediment and erosion control.

General measures

- Implementation of erosion and sediment controls such as silt fencing, French drains and drainage ponds.
- Eight separate settlement ponds will be constructed on site at the prior to excavation works.

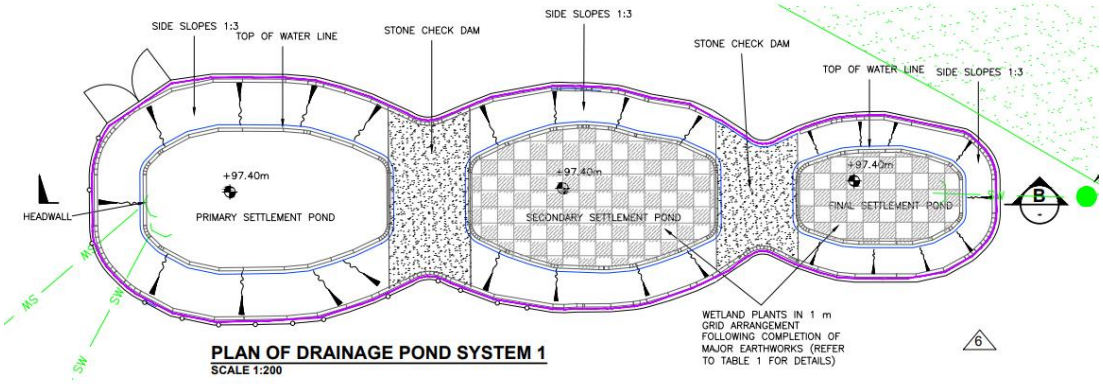


Figure 01 - Example of Drainage Pond Layout

- One group of 4no. ponds, 3 no. permanent and 1 no. temporary, will be located northwest of the substation and 4 no. ponds , 3 no. permanent and 1 no. temporary located to the east of the compound.
- Ponds will be used to treat water arising from dewatering excavations during the construction phase. After major earthworks, the ponds will be upgraded to facilitate operational surface run off.
- Excavation for the entire raft foundation will not be opened on mass but opened and brought to leanmix level, whereby the contractor will only excavate materials that can be backfilled easily to prevent ingress of water and reduce necessity of water pumping.
- Permanent ponds located to the North of the substation will contain rainfall on the 400kV substation building during both construction and post-handover.
- Permanent ponds located to the south will accommodate the rainfall generated from the transformer bund and the 110kV substation building

Figure 02 - Example of Silt Fencing

- The settlement ponds will have a permanent water depth of 300mm, thus eliminating any possibility of dust in dry periods
- The ponds will provide suitable attenuation for a 1 in 100-year rainfall event consisting of 20mm rainfall per hour for the entire complex when complete
- A 2 mm HDPE impermeable liner with welded joints wrapped in a geotextile fleece will be installed and laid across the pond excavation, with a minimum lap length of 300 mm. This will ensure no connection between the settlement ponds and the underlying subsoil and groundwater.
- The pond cells will be lined with an impermeable 2 mm HDPE geomembrane wrapped in a geotextile fleece beneath a 50 mm thick bed of 20 mm single-size clean stone.
- For the limited areas where the base of the settlement pond is below the water table, additional 20mm stone will be added to ensure no buoyancy of the HDPE liner. This will ensure no connection between the settlement ponds and the underlying subsoil and groundwater.
- A 50 mm deep layer of 20 mm single sized clean stone shall be placed across base of excavation
- Drainage of site berms containing the excavated materials will be carried out via French drains until the berms are vegetated. The berms will be surrounded by silt fences until vegetated and stabilised. See example of silt fence in Figure 02.

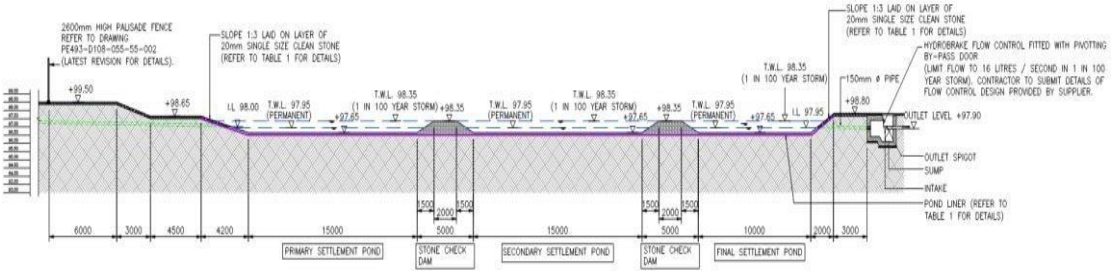


Figure 03 - Example of drainage pond levels shown above

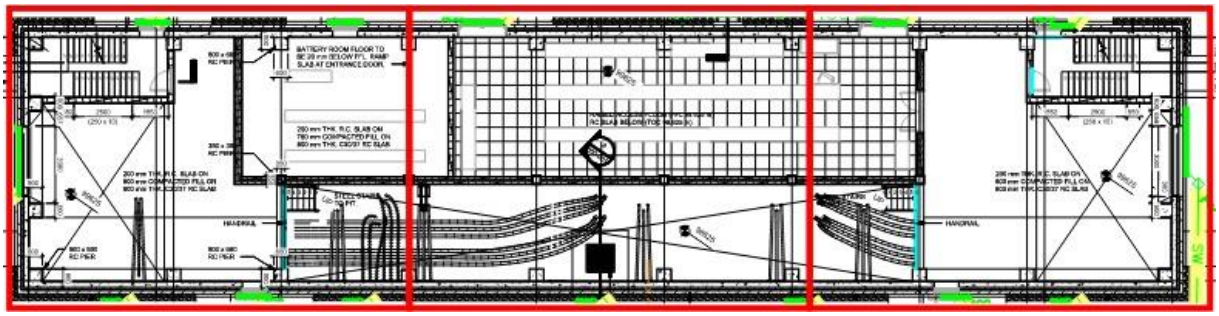
- Sediment ponds and discharge points will be monitored on a daily basis to ensure discharged water is clean
- Sediment control infrastructure will be regularly maintained during the construction phase by cleaning of sediment ponds, repair of silt fences and vegetation in drains. Undertaking this maintenance will ensure the effectiveness of the ponds and ultimately , water quality discharge.
- Monitor access road ensuring it is kept clean to prevent run off entering watercourse.
- Monitor natural water flow paths and redirect to settlement ponds if possible to prevent entry into water course prior to treatment.

EMP-2 Management of Excavations

Purpose
To describe measures for the management of all excavations and excavated soil and rock on the site.

General measures

- Management of excavations will strictly be adhered to, this will be done by partially opening up building footprints as required without large amounts of stripping being undertaken.



Building foundations will be broken down into segments whereby formation level will be exposed for parts of the build only approximately 30% at a time, with stone build up placed and compacted before another section opened.

Figure 04

- Soils excavated during construction will be stockpiled permanently, formed to no more than 3m height and seeded to prevent erosion.
- Drainage protection measures such as the drainage ponds and French drains will be constructed prior to substation and road construction. This approach will be used in combination with the installation of other drainage protection measures in advance of construction, such as the installation of silt fencing.
- Within and around excavations, pore water pressure will be kept low by avoiding loading the soil/subsoil with cognizance to the existing drainage and how structures could affect it.
- All temporary cuts/excavations will be carried out such that they are stable or adequately supported. Where appropriate and necessary, cuts and excavations will be protected against ingress of water or erosion using cut off drains around the excavation works. Temporary works will be such that they do not adversely interfere with existing drainage channels/regimes.
- Plant and materials will be stored in approved locations only (such as the proposed site compounds) and will not be positioned or trafficked in a manner that would surcharge existing or newly formed slopes.
- Excavated topsoil and subsoil will be stored onsite for reuse, none will leave site.
- Surface vegetated scragh / surface turves will be carefully cut and removed and placed alongside the excavations for temporary storage.
- The scraghs/surface turves will be replaced (vegetated side up) and firmed into place with the back of the excavator bucket.
- Any soil moved off-site will be carried out by contractors licensed under the Waste Management Act of 1996 (as amended 2001), the Waste Management (Facility Permit &

Registration) Regulations of 2007 and the Waste Management (Collection Permit) Regulations of 2007.

- In the event of contaminated soil being identified all works in the area local to the contamination will be stopped immediately. Samples will then be taken and sent for testing to an accredited laboratory. Following on from testing and conformation as to the nature of the contamination, a remediation plan must be developed.
- The potential impact on the land and soils of the site due to excavations will be lower during operation and maintenance, as most excavations will have been reinstated. Some erosion of soil may continue into the operation phase, however as vegetation becomes established and equilibrium is achieved, erosion will cease.

EMP-3 Fuels and Oils Management

Purpose

To describe measures for the management of all fuel and oils on site for the protection of watercourses or groundwater from any spills.

General measures

- The potential for hydrocarbons getting into the existing drains and local watercourses will be mitigated by only refuelling construction machinery and vehicles in a designated refuelling area. A clearly defined documented refuelling procedure shall be implemented. The designated refuelling area shall be located at least 25 metres away from watercourses.
- Refuelling will be carried out using 110% capacity double bunded mobile bowsers. The refuelling bowser will be operated by trained personnel. The bowser will have spill containment equipment which the operators will be fully trained in using.
- To reduce the potential for oil leaks, only vehicles and machinery will be allowed onto the site that are mechanically sound. An up-to-date service record will be available for vehicles and machinery.
- Plant, site vehicles and machinery shall be checked daily and are to be well-maintained. Any machinery leaking fluids must be repaired or removed from site immediately. Any servicing operations shall take place at least 25m from watercourses (unless servicing is required at the point of breakdown) and over drip trays.
- Potential leaks from delivery vehicles will be reduced by visually inspecting all delivery vehicles for major leaks.
- Spill kits will be easily accessible and located close to identified pollution potential sources or sensitive receptors, these locations will be communicated to site personnel during the site induction. Where items have been used or functionality has been compromised, the spill kits would be replaced as necessary.
- The scale of potential impacts on downstream water quality will be reduced by only storing minimum amounts of oils for construction equipment service top up only.
- Oil containers must be stored within a secondary containment system e.g. bund for static tanks or a drip tray for mobile stores.
- Access to oil stores will be controlled within a locked steel container within the site compound. The site compound will be surrounded by a palisade fence and locked when outside of working hours.
- Leakages of oil from oil stores will be prevented by storing on drip trays which have a capacity of 110% of the total volume of the stored oil. Ancillary equipment such as hoses and pipes will be contained within the bunded storage container.
- The potential for leaks will be prevented through monitoring oil storage tanks/drums for leaks and signs of damage. This will be carried out daily by the Environmental Manager.
- Long term storage of waste oils should not be allowed on site only storage of oil to correct construction equipment levels. Waste oils will be collected in leak-proof containers and removed from the site for disposal or re-cycling by an approved service provider/fitter for disposal.
- The Environmental Incident and Emergency Response Plan details arrangements in place to deal with environmental emergency such as a fuel or oil spill on site.
- Appropriate environment incident response will be facilitated by training all vehicle/machinery operators in the use of the spill kits and the correct containment and cleaning up of oil spills or leaks. This training will be provided at site induction.

- Should there be an oil leak or spill, the leak or spill will be contained immediately using oil spill kits. This contaminated material and soil will be properly disposed of in a licensed facility.
- The Environmental Manager will be immediately informed of the oil leak/spill and will assess the cause and the management of the clean-up of the leak or spill. They will inspect nearby drains for the presence of oil and initiate the clean-up if necessary.
- Immediate action will be facilitated by easy access to oil spill kits. An oil spill kit that includes absorbing pads and socks will be kept at the site compound and in site vehicles and machinery.
- In the event of a major oil spill, a nominated company will provide a rapid emergency response service for major spills.

EMP 4- Management of Concrete

Purpose

To describe measures for the management of concrete on site for the protection of watercourses from any spillages.

General measures

- To reduce the potential for cementitious material entering watercourses, concrete pours will be supervised by the Project Manager, a suitably qualified Engineer and the Environmental Manager.
- The construction manager will ensure that the area of the pour is completely drained of water prior to pour commencement.
- Pours will not take place during forecasted rainfall.
- Incidental rainfall from light showers during the period of a pour is typically absorbed into the concrete matrix but heavier showers can result in some run off from the top surface of the concrete pour. If run-off is encountered in great enough volume, the Environmental Manager will block the outflow from the drains to retain or treat the run-off until the pH is neutral before discharge to the drainage network.
- In the event of a spill within the immediate vicinity of drainage ponds or French drains, the Environmental Manager will temporarily block the drains and monitor the pH levels of the water in the associated settlement ponds. Any spillage will be cleared immediately and deposited in the chute wash down area.
- During the pouring of concrete, effective containment measures will be implemented to avoid spilling concrete outside construction areas and to prevent concrete entering any drainage system. To reduce the potential for cementitious material entering watercourses, concrete pours will be supervised by the Site Manager. There will be no washing out of delivery trucks on site only cleaning of concrete chute.
- Pours will not take place during forecasted heavy rainfall.
- Wet concrete operations are not envisaged for this site within or adjacent to watercourses . However, if wet concrete operations are required in such locations, a suitable risk assessment will be completed prior to works being carried out.
- To reduce the volume of cementitious water, washout of concrete trucks will not take place on site. Concrete trucks will be washed out off site at the source quarry, only concrete truck chutes will be washed down on site. The concrete trucks will wash down their chutes at a designated chute wash down area in the site compound.
- The environmental manager will monitor the pH of the water in the chute wash down bund. Once full this will be returned to the concrete batching plant to be re-used via delivery truck bottle.
- Temporary storage of cement bound granular mixtures will be on hardcore areas. Cement products are hazardous and should always be stored in a COSHH store or similar (shipping container), and only be in the open when in use. If cement products are temporarily located in the open, then they will be located within an impermeable bunded area and covered to prevent contact with rainwater. This will prevent direct drainage of cement storage areas to surface waters. Bunding will be in the form of sandbags or silt fencing.

Concrete pouring

Due to the large concrete pours required to construct the substation, the pours will be planned weeks ahead. Special procedures will be adopted in advance of and during all concrete pours to minimise the risk of pollution. These may include:

- Using weather forecast to assist in planning concrete pours and avoiding large pours where prolonged periods of inclement weather conditions are forecast or persist.
- Ensure that excavations are sufficiently dewatered before concrete works commence.
- Ensure that covers are available for freshly placed concrete to avoid runoff to proximal receptors during inclement weather conditions.
- There will be no large-scale batching of concrete on the site. All concrete will come from a certified supplier

Concrete washout

- Kilwex will place a 12-yard skip on a suitable area of hard standing.
- A layer of sand will be placed on the bottom of the skip.
- The skip will then be lined with a layer of heavy-duty polythene.
- Concrete delivery vehicles will then be permitted to reverse up to skip and wash out their chute (only) into the washout skip.
- Water levels in the skip will be monitored daily.
- Skip will be covered as required during periods of heavy rainfall.
- As skip reaches capacity the “Washout water” from will be pumped into an empty concrete delivery vehicle to be returned to the concrete supplier, where this water will be reused in the batching process.

EMP 5 Protection of Habitats and Fauna

Purpose
To describe measures for the management and protection of habitats and fauna on the site.

General measures

- An ecological walkover of the site was taken in March 2022 and December 2022 by ESB ecologists. It was determined that the site has no rare flora and no volant/non-volant mammals were found during those walks. Therefore, no established habitats or protected species of interest were noted during any of the ecological surveys.
- The project ecologist will be employed during the construction phase of the project. Duties will include the review of all method statements, delivery of toolbox talks and monitoring of construction phase to ensure that all environmental controls and mitigation measures are implemented.
- Spraying of vegetation using pesticides is strictly prohibited.
- Habitat disturbance to fauna will be limited by controlling the movement of maintenance vehicles. Construction vehicles will not encroach onto habitats beyond the proposed footprint.
- In the rare event that protected faunal species are found actively using the site for breeding/roosting during the construction phase, works will cease immediately and the area will be cordoned off until advice is sought from a suitable qualified specialist.
- Construction activities will be restricted from 7:00 AM to 7:00 PM, Monday to Friday and between 8AM and 6PM on Saturdays. Construction work will not take place at night unless in exceptional circumstances.
- Should the resting or breeding places of any protected species be discovered within the site during construction works, ESB will be informed.
- Kilwex ensures that prior to entering the site, the equipment would be visually inspected to ensure all adherent material and debris has been removed.

EMP 6 Waste management

Purpose

To describe measures for the management of all wastes associated with the construction of the substation and OHL.

General measures

- A Resource Waste Management Plan has been developed for the Project. This plan details projected Project waste arisings and avenues for disposal. All Project waste is recorded in the Waste manifest which will form part of the Monthly Environmental Monitoring Report. This document will be made available for all personnel and will be in the site compound office.
- Kilwex Ltd. shall ensure that all such waste arising from their own or their subcontractors' activities is promptly disposed of into segregated containers and no extraneous material is discarded on site. All waste products shall be removed off site by a waste contractor with suitable licences and permits to the approval of the Engineer and the relevant local authority. Permit details shall also be supplied by the appointed waste contractor detailing the destination waste handling facility or landfill.
- Recycling shall be implemented across the site and compound with all waste to be segregated onsite into the following categories: timber, metal, general waste, recyclables, canteen, compost and hazardous waste. Separately labelled skips are to be provided for each category of waste and these shall be emptied regularly. Metal containers for inflammable waste shall be provided by the Contractor and arrangements made for regular collection and disposal off the site.
- The waste management hierarchy actions are: prevention, minimisation, reuse, recycling, energy recovery and disposal. Waste prevention is the most favoured option meanwhile disposal the least favoured option. This hierarchy of actions shall be considered during the entire construction process.
- As part of the record keeping procedures, the Environmental Manager should keep records provided by waste contractors of all waste being removed from site. The Environmental Manager should record waste removed from site on a monthly basis. This information should be recorded in a standard format.
- A dedicated storage area will be provided in the site compound for building materials such as blocks, tools, fence posts, booms, wires and others.
- Access to stored materials will be restricted, the site compound will be securely fenced from the outset and will be locked when there are no site personnel present.
- To contain and manage construction phase waste, multiple skips will be provided at the storage compound. These skips will be emptied when required.

EMP 7 Traffic Management

Purpose

To describe measures for the management of all traffic, including construction traffic and oversized loads, for the minimisation of disturbance and nuisance to the local community.

General measures

- The access to the construction site will be via a modification to the existing road that currently serves a farmstead with a dwelling house, located in the townlands of Coolnabacky and Esker. The access road will be approximately 1.2km from the R426(public road) to the substation compound gates.
- Kilwex shall maintain all public roads and site access roads and clear site dirt and debris to the satisfaction of the local authority and EMP.
- Legal speed limits will be emphasised to all staff and contractors during the induction training.
- Kilwex will be required to schedule deliveries in such a way that construction activities and deliveries do not run concurrently such as delivering materials the same day as large concrete pours.
- Kilwex will be required to interact with members of the local community and suspend deliveries on the days of any major events that have the potential to cause larger than normal traffic volumes to the road network in the vicinity of the works.
- A spotter will be put in place to direct construction traffic when multiple vehicles may be entering or exiting from site. Appropriate signage should be placed on both sides of the site access point to warn road users.
- The appropriate authorities will be notified of the movement of abnormal loads and traffic management measures agreed.

EMP 8 Management of Archaeology

Purpose
To describe measures for the management and protection of archaeological and cultural heritage on the site.

General measures

- All topsoil stripping/ground reduction works onto the surface of the underlying geological-derived subsoils will be monitored by a suitably qualified and experienced archaeologist.
- The topsoil will be removed by mechanical excavators fitted with wide, toothless grading buckets.
- In the event that subsurface remains of archaeological interest/potential are uncovered during the course of topsoil stripping, then works in the immediate area will cease, pending investigations by the appointed archaeologist and consultation with the National Monuments Service, Department of Housing, Local Government and Heritage – if required.
- A report describing the results of the programme of Archaeological Monitoring, and any other archaeological interventions that might be required, will be prepared and submitted to the Planning Authority in further compliance with Condition 10 of the Grant of Planning.
- The Site Archaeologist will be responsible for highlighting any new or existing archaeological structures to the Main Contractors Engineers during works.
- Machinery used in association with the construction works will avoid all known recorded archaeological monuments and newly detected sites and should not be operated within proximity to the latter. Construction personnel will follow the direction of the Site Archaeologist in this matter.
- Satisfactory arrangements will be agreed for the recording and removal of any archaeological material considered appropriate to remove.

EMP 9 Construction Noise

Purpose
To describe measures for the management of impacts from construction noise

National Roads Authority Guidelines for the Treatment of Noise

Those are the only guidelines for construction related noise in Ireland. These guidelines are as follows:

Monday to Friday
07.00 to 19.00hrs 70 LAeq (1hr) and 80 dB LpA (Max) slow dB
Monday to Friday
19.00 to 22.00hrs 60 LAeq (1hr) and 65 dB LpA (Max) slow dB
Saturday
08.00 to 16.30hrs 60 LAeq (1hr) and 75 dB LpA (Max) slow dB
Sundays & Bank Holiday
08.00 to 16.30hrs 60 LAeq (1hr) and 65 dB LpA (Max) slow dB

General measures

- Noise nuisance can potentially arise using mechanical tools, general construction activities, and from the movement of vehicles servicing the site. However, due to the temporary and transient nature of construction phase works, the existing noise environment associated with the development site and the surrounding area and distance to the nearest sensitive receptors, the impact is not considered to be significant.
- Ensure machinery is modern, well maintained and working properly.
- Avoid idling engines. Engines will be switched off when not in use.
- Plant will be used in an appropriate manner with respect to minimizing noise emissions.
- Noise and vibration monitoring will be undertaken on an ongoing a nearby landowner property
- Results will be reported as part of the Monthly Environmental Monitoring Report.
- Weather conditions should be considered when reviewing noise levels as high wind speeds can negatively affect noise levels.

EMP 10 Dust Management

Purpose

To describe the measures for the management of nuisance impacts on air quality from construction generated dust.

G**eneral measures**

The potential for dust to be emitted depends on the type of construction activity being carried out in conjunction with environmental factors including levels of rainfall, wind speeds and wind direction. The potential for impact from dust depends on the distance to potentially sensitive locations and whether the wind can carry the dust to these locations. The majority of any dust produced will be deposited close to the potential source and any impacts from dust deposition will typically be within several hundred metres of the construction area.

- Limit the speed to 15 km/hour throughout the construction site, especially at access/egress locations.
- Importance of respecting speed limits to avoid dust mobilization will be addressed during the toolbox talks.
- In periods of extended dry weather the following shall apply:
    - Dust suppression may be necessary within the site compound and internal access road to minimize the nuisance risk.
    - If necessary, water will be abstracted from settlement ponds in the site construction drainage system and pumped into a bowser or water spreader to dampen down the internal access road and site compounds to prevent the generation of dust.
    - Water bowser movements will be carefully monitored in order to avoid the excessive usage of water which may exceed the requirement.
- Trucks will be covered if they transport dusty material.
- Implement measures to control emissions of fine particulate emissions, in particular particles less than 10 um aerodynamic diameter where drilling, blasting, grinding or similar types of rock or concrete operations are taking place.
- The control measures to minimize dust will be reviewed at regular intervals during the construction phase to ensure the effectiveness of the procedures in place and to maintain the goal of minimisation of dust through the use of best practice and procedures.

EMP 11 Invasive Species Management

Purpose
To describe measures for the management of invasive species on site.

General measures

- There are no signs of invasive plant species within the site boundary or along the peripheral areas during any of the ecological surveys and walkovers. Ecological site walkovers will be conducted on a monthly basis and an inspection for invasive species will form part of this survey. If identified, invasive species will be managed as per the Kilwex Environmental Procedures which will be available for review and reference in the compound office on site.
- The project ecologist will identify access routes where invasive species occur in liaison with the contractor and all site personnel will be trained in the identification of particular invasive species.
- Works will be scheduled so that machinery used in areas identified as invasive species occurrence areas will be brought back to the compound for cleaning, prior to being used at any location where invasive species do not occur.
- Material potentially contaminated with invasive plant seed will be treated in accordance with relevant guidance such as *The Management of Noxious Weeds and Non-Invasive Plant Species on National Roads* (NRA, 2010); Invasive Species Ireland, Best Practice Guidelines and *Managing Japanese Knotweed on Development Sites* (UK Environmental Agency, 2013).
- In areas where alien invasive species are present, vehicles will carry a 'disinfection box'. This will contain Virkon Aquatic or another proprietary disinfectant, a spraying mechanism, cloths or sponges, a scrubbing brush and protective gloves.
- Disinfectants will be used strictly in accordance with the manufacturer's instructions. They will be disposed of safely and never close to open waters such as drains or water streams.
- All equipment that has come in contact with water or soils will be visually inspected for evidence of attached plant material, adherent mud or debris. This will be done before entering and leaving the site. Any attached or adherent material will be removed before leaving the site.
- Prior to arrival on site, contractor's vehicles and equipment will be thoroughly cleaned, preferably using high-pressure steam cleaning where feasible or a normal power hose.
- The Project Ecologist will advise the contractor on the appropriate mitigation measures required.

EMP 12 Emergency Response Plan

Purpose

To describe measures for the management of emergencies which involve people.

Plan of action

- As soon as an employee witnesses an incident, they will raise the alarm and will contact a member of management and the emergency services on either 999 or 112 and provide the GPS Coordinates if required.
- If the person is trapped underneath the vehicle/machine is not in any more danger, no attempt will be made by site personnel to remove the victim until the emergency services arrive on site.
- If, however there is a severe danger that the situation might become worse before the emergency services arrive, the vehicle/ machine shall be secured by means of tying back with adequate ropes and chains attached to other close by machines. Once the vehicle/machine is secure and the scene is safe, a trained first aider can administer first aid to the casualty.
- The onsite emergency co-ordinator will appoint a person to wait at the site entrance or closest point to where the emergency services have been directed to escort the emergency services to the injured person and the scene of the emergency.
- No attempt shall be made to turn an overturned vehicle/machine into its correct position until the victim is removed safely.
- The onsite emergency co-ordinator will appoint a person to go to the hospital if a casualty or casualties are taken there and will keep the company informed.
- The onsite emergency co-ordinator will ensure that the scene is preserved for investigation.

EMP 13 Site environmental Training and Awareness

Purpose

To describe measures for the training of all site personnel in the protection of the environment and the relevant controls.

General measures

- Environmental Manager will ensure that all personnel receive adequate induction training, incorporating environmental awareness, introducing the CEMP particulars, familiarizing the workers in what to do in case of an environmental emergency and prepare them for a promptly response in case of an environmental emergency.
- Toolbox talks on Environmental Control measures will be used as part of mitigation measures. These toolbox talks will be site specific and it will explain topics such as environmental mitigation, nuisance emissions, site speed limits, emergency response procedures, environmental awareness relating to the sensitivity of the watercourses, ecological exclusion zone, among others.
- Site environmental inspections will be carried out and documented regularly to ensure that work is being carried out in accordance with the Environmental Control Measures.
- Notify the relevant statutory authority about environmental incidents and carry out investigations, reporting incident and remedial actions details taken to the relevant authority.

EMP 14 Monitoring and Auditing

Purpose

To describe measures for environmental monitoring during the construction works and audit of control measures to ensure environmental protection.

Plan of action

- All mitigation measures, any planning conditions and relevant construction methods will be monitored on site. The construction phase of the project will be supervised and monitored by ESB, ESB-EMP and suitably qualified contractor personnel.
- Routine inspections of construction activities will be carried out daily by the contractor's construction management team to ensure all control measures to prevent environmental impact, relevant to the construction activities taking place at the time are in place.
- Environmental inspections will ensure that the works are undertaken in compliance with this CEMP and any subsequent updates to this document.
- Environmental site inspections will be carried out by suitable trained staff. Those environmental records will be made available to the Local Authority when requested.

Noise and Vibration monitoring

- Construction noise at all locations will arise but will be limited in intensity and duration by the nature of the construction activity. The NRA Guidelines (EMP 9) for construction noise will not be exceeded at any stage during the construction process.
- Noise and vibration monitoring will be undertaken on an ongoing basis at a nearby landowner property and will be reported as part of the Monthly Environmental Monitoring Report.
- Weather conditions would be considered as high wind speeds can negatively impact noise levels.

Dust monitoring

- Excavation will potentially be a primary source of dust, especially during periods of dry weather.
- The public roads will be subject to regular inspection for cleanliness and it will be checked that trucks are covered during the transport of spoil material. Again this should not occur as all excavated material is remaining on site.
- Water will be used as dust suppressant if cutting equipment is used or if there is risk of dust emissions from the roads, this will happen more often during dry weather.
- Dust monitoring will be set up at the nearby landowner property
- Dust pots will be lifted every 30 days and dust samples analysed using the Bergerhoff Method
- Dust levels will be measured against current EPA License threshold limits (350 mg/m2/day).. Results will be reported in the Monthly Environmental Monitoring Report.

Water monitoring

- Boundary watercourse will be monitored upstream and downstream of the site boundary, outlet of tufa spring and outlet from settlement ponds (SW01 – SW05)
- The groundwater monitoring points comprise of boreholes specially constructed within the shallow sediments (BH01 – BH4) and will inform condition of hydrogeological environment
- Surface water will be **visually inspected daily** - any turbidity or discolouration should be reported.
- The environmental manager will undertake **weekly measurements** in-situ, at surface water sampling locations. Dissolved oxygen, pH, EC – Conductivity, Turbidity and Temperature will be measured using handheld calibrated equipment.

- Coyle Environmental on behalf of Kilwex will undertake **monthly sampling** at surface water sampling locations. The following parameters will be analysed –pH, Calcium, Magnesium, Potassium, Ammonia NH4, Nitrate, Alkalinity, Phosphorus, Total TPH & Suspended Solids. Results will be measured against current EQS standards for water quality - SI272/2009 as amended by SI372/2012; SI386/2015; SI77/2019; SI659/2021

- Coyle Environmental on behalf of Kilwex will undertake **monthly sampling** at groundwater sampling locations. The following parameters will be analysed –pH, Calcium, Magnesium, Potassium, Ammonia NH4, Nitrate, Alkalinity, Phosphorus, Total TPH & Suspended Solids - Results will be measured against current European standards for groundwater quality SI366/2016 Groundwater Regulations

All sampling will be taken in accordance with BS EN ISO 5667 for surface water. Analysis will be at an INAB accredited laboratory.

EMP 15 Environmental Accidents, Incidents and Corrective Actions

Purpose
To describe measures for the recording, investigating and close-out of any environmental accidents or incidents on the site.

General measures

- Assess each on-site operation separately to identify all potential risks that could cause an environmental accident.
- Identify points in your operations where you can eliminate or control these risks.
- Discuss with the Project Ecologist and Site Engineer to agree environmental risks and control points.
- Implement agreed control measures at these control points.
- After agreed period, the project Ecologist should carry out an audit to check if control measures have been correctly implemented.

Plan of action

- The Environmental Manager or Construction Manager will be contacted as soon as possible where there is any incident that carries the possibility of negative environmental consequences.
- The Emergency Response Plan and standard procedures will be applied to get the incident under control and prevent injury or loss of life in the first instance.
- Work in the area will be halted and the Environmental Manager will be called to the scene to assess the situation and to decide on initial responses and remedial measures.
- Once the situation is under control, the environmental accident or incident will be recorded, and the cause investigated.
- Any remedial action required will be taken to mitigate any damage and prevent a reoccurrence.
- Corrective actions will be communicated to personnel and sub-contractors where relevant-particularly where it results to a change in procedure.

EMP 16 Environmental Complaints

Purpose

To describe measures for the recording and resolving complaints by third parties, including residents or members of the public.

General measures

- Any internal or external environmental complaints received will be recorded and investigated.
- Immediate action is recommended to resolve environmental complaints to avoid any nuisance to the local community or any environmental damage.

Plan of action

- Record of any complaints.
- Follow up by the relevant site representative (Project Ecologist or Environmental Manager).
- Apply remedial measures if required.
- Ongoing communication with complainant to confirm the resolution.
- Reassess the task, training, communication with site personnel as required.