Appendix 07 Emergency Response Plan

EMERGENCY RESPONSE PLAN

Laois Kilkenny electricity Reinforcement Project – Unit 1: A new 400kV/110kV Substation at Coolnabacky townland, Co. Laois.

Main Works Job No 286.

286-ESB-ERP_01

ISSUE FORM	
Project number	286
Document number	ERP – Reinforcement Project Coolnabacky – R001
Document revision	001
Document title	Emergency Response Plan
Document status	Active
Document prepared by	Daniella O'Neill
Document checked by	Fintan McKeon

Contents

1 Introduction

This Environmental Emergency Response Plan (ERP) has been developed in accordance with the Kilwex Environmental Procedures.

This plan is a working document, clearly stating the arrangements in place to manage the significant environmental aspects and legal requirements of this project. This plan covers Kilwex's activities and that of its subcontractors.

This plan has the commitment of the Project Directors, Project Manager, Site Manager and Engineers to fulfil the requirements of the Plan.

1.1 Purpose of the Plan

This ERP describes how Kilwex will manage environmental emergencies for the ESB Reinforcement 400kV Substation at Coolnabacky.

This ERP has been developed within the framework of the Kilwex Environmental Management System. This Plan will:

- Identify the emergency processes required to take control of an emergency situation.
- Maintain a state of preparedness to prevent or reduce accidental emissions to the environment.
- Minimise loss or damage to the environment.

This procedure will be updated when additional hazards are identified and controls of the same are required.

1.2 Project Overview

The substation will be constructed in a 6.7 hectare field in the townland of Coolnabacky near the village of Timahoe, Co. Laois.

Figure 1: Aerial image of site location

The development consists of the following:

- 2no. steel framed buildings within a 117m x 98m plan area secured by a 2.6m high palisade fence.
- Installation of 2 no. 500MVA transformers, positioned in bunded enclosures between the two steel-framed buildings (plan area 25m x 10m each).
- Eight separate settlement ponds (average area 110m^2) constructed on site at the commencement of the construction phase.
- One group of 4No. settlement ponds will be located northwest of the substation and 4No. settlement ponds located to the east of the compound. These are used to treat surface water being discharged from the compound prior to entry into water courses.

The 400kV substation is a 64m x 15.3m x 12m building equipped with 8 bays consisting of 2No. Lines, 1No. from Moneypoint and 1No. Dunstown, 2No. transformers and 4No. spare bays for future proofing the building.

The following are features included in the building:

- Building will house the 400kV switchgear (electrical equipment)
- The build substructure is a waterproofed cast in-situ raft foundation.
- Walls are constructed from a combination of insitu concrete and insulated cladding. Cavity will be formed with external finish being rubble stone walling and insulated cladding panelling.
- Precast first floor & roof slabs will be installed with screed on top.
- Roof will be constructed with precast concrete panelling with insulation.
- Gantry cranes will be installed.

The 110kV substation building is 50m x 11.5m x 12m with 8 bays consisting of 3 no. lines Athy, Portlaoise and Ballyragget, 2 no. transformers and 3 spare bays for future development.

The following are features included in the building:

- Building will house 110kV switchgear (electrical equipment).
- The build substructure is a waterproofed cast in-situ raft foundation.
- Steel frame structure used to hold precast and insulated panels in place.
- Composite first floor with additional reinforced structural screed on top.
- Walls are constructed from precast insulated concrete sandwich panels with an insulated cladding panel above.
- Precast concrete insulated sandwich panels will be faced with a stone façade system.
- Roof will be constructed with an insulated panel with preformed gutter attached.
- Gantry cranes will be installed.

Working Hours

The normal working hours within the site shall be Monday to Friday between 07:00 hours and 19:00 hours and Saturday between 07.00 and 13.00 hours with no working on Sundays or Public Holidays.

In exceptional circumstances work may be required outside of these hours.

2 Procedure

In the event of an environmental emergency, all personnel will react promptly and adhere to this procedure.

All site personnel and visitors will be inducted in the provisions of the Emergency Response Plan.

The following outlines some of the information, on the types of emergencies, which must be communicated to site staff:

- Release of hazardous substance – Fuel and oil spill
- Concrete spill or release of concrete, silt etc.
- Flood event – extreme rainfall event
- Environmental buffers and exclusion zones breach e.g., ecological exclusion zone for protection of Tufa Springs
- Housekeeping issues or mismanagement of waste storage area
- Potential impact to archaeological or ecological features
- Fire on site (cross-reference site Safety Emergency Plan, as appropriate)

If any of the above situations occur; the particulars of the Emergency Response Plan are activated. The Site Manager will be responsible for overseeing the Emergency Response Plan and will be prepared and ready to implement the plan at all times. The Environmental Manager from Coyle Environmental will be immediately informed and report to the scene. They will be aware of the following;

- Nature of the situation – brief description of what has happened
- Location of the incident
- Whether any spill has been released
- Whether the situation is under control

Procedures in relation to emergency response plan will be included in induction. They will be aware of the following:

- Locations of spill kits will be indicated to all on site. Each person on site will be aware that each piece of construction equipment will carry a spill kit.
- All operators will be aware of the designated locations where they can refuel and who they must contact to undertake. They will be aware of the requirements for spill trays and know when the extents of their work area end.
- All operatives on site will be aware that water cannot be simply discharged into the river, but must be pumped into the settlement ponds prior.
- They will be aware that in the event of a fuel spillage, the site manager must be contacted.
- They will also know the extents of the construction site. All operatives will know where the sensitive area that is fenced off is located and know of the existence of the sensitive tufa on site.
- Site personnel will be educated to know if any issue in regard to pollution on site arises they must contact the site manager immediately.

2.1 Measures to be taken in the event of an Environmental Emergency

The list below presents guidelines on what to do in the event of an environmental emergency;

- IF SAFE (USE PPE), stop the source of the spill and raise the alarm to alert people working in the vicinity of any potential dangers.
- IF SAFE (USE PPE), contain the spill using the absorbent spills material provided.
- Do not spread or flush away the spill. Please refer to appended site plan for the location of nearest spill kit. All plant and machinery should be fitted with a portable spill kit and personnel should be trained in its use.
- Cover or bund off any sensitive areas, where appropriate.
- If possible, clean up as much as possible using the absorbent spills materials.
- Do not hose the spillage down and do not use any detergents.
- Store any used absorbent material in an appropriate container so that further contamination is limited.
- Used absorbent material to be disposed of by a licenced waste contractor only.
- An accident investigation should be performed in accordance with procedures and the report sent to the Environmental Manager. Please see Appendix 2 Incident Report Form Doc. No.: IMS_S035 REV 00.
- Findings of the investigation should be reviewed, and any preventative measures identified and implemented immediately.
- Any changes in procedures as a result of the incident should be disseminated to all personnel including sub-contractors and site visitors.
- Under no circumstances should anyone place themselves in harms way to resolve an issue.
- Personnel with any concerns regarding the potential for an environmental incident, they should discuss this with the Site Manager, and they will bring this issue to the attention of the Environmental Manager (Coyle Environmental).

2.2 Environmental Incidents and Definitions

2.2.1 Major Environmental Incident

Any situation which has resulted in significant pollution requiring high level of resources both inside and outside of site for response and remedy and must therefore be reported to Site/Company Management, the Client and/or any relevant statutory authority.

2.2.2 Minor Environmental Incident

Any situation which has resulted in environmental pollution which requires minimal action to aide recovery from Site/Company Management. Non-reportable to any relevant statutory authority.

2.2.3 Main Environmental Incident Controller

The main environmental incident controller will be the Site Manager with the aid of the Environmental Manager (Coyle Environmental).

They will manage the emergency, contact emergency services if necessary and maintain a continuous review of possible developments. Section 4 provides details of main contact in case of an environmental emergency.

2.2.4 Environmental Incident Examples

An environmental incident may include but is not limited to:

- Spillage of hazardous materials (as defined by the Waste Management Acts,)
- A breach of any specified environmental limits as detailed in contractual documents or NIS documents (noise, vibration, air)

- Uncovering of contaminated land
- Any spillage which cannot be rapidly contained and controlled, these include hydrocarbons such as diesel, oil spills etc
- Inappropriate disposal of waste
- Runoff of sediment-laden or otherwise polluted water to a watercourse
- Spills of fuel, oil or hazardous substances into water or a watercourse
- Concrete waste/washings disposed in a non-designated area
- Working within a protected area.

2.2.5 Emergency response procedure process

In the event of a major or minor environmental incident occurring, the following actions will be immediately undertaken;

- Isolate the source of the pollution
- Clean up spill under the advice of the environmental manager
- Identify and execute measures to prevent / minimise the emissions / malfunction under the advice of the environmental manager
- Evaluate the environmental pollution, if any, caused by the incident and refer to environmental manager for advice
- Corrective actions taken to remedy the situation
- Carry out an investigation to identify the nature, source and cause of the incident and any emission arising from the incident.
- All related information will be documented concerning the environmental incident and photographs gathered.
- Discuss with all relevant parties involved in the matter
- When all the information has been gathered (immediate cause, basic cause and corrective actions etc), it will be added to the Incident Tracking system. If any further actions have to be taken, these will be agreed and timescales set.
- All incidents must be submitted on the Incident Tracking system within 7 days.
- All environmental incidents that are added to the Incident Tracking System are reviewed by the HSE department prior to final approval and are included on the monthly 'Loss Events Report'.

This ERP will be communicated to all Kilwex Personnel and will be reviewed and updated (where necessary) in conjunction with the CEMP and RWMP.

2.3 Fuel and Chemical Storage and Management

Below are some measures which will be implemented onsite with regard to fuel storage and management:

- Any plant being refuelled on site e.g., excavators, dumpers etc., will do so at a designated location.
- Fuel will be transferred to construction equipment using a bunded fuel bowser. This bowser will be filled weekly by a fuelling lorry.
- Drip trays will be used while refuelling with spill kits being deployed, if required.
- Rigid and articulated vehicles will be fuelled off site as would all site vehicles (Jeeps, cars and vans).

- Only designated trained operators will be authorised to refuel plant on site. Records of refuelling of vehicles will be kept on site. These records will contain details of vehicles being refuelled and the personnel responsible.
- Mobile bowsers, tanks and drums will be stored in a secure, bunded, impermeable storage area, away from drains and open water;
- Fuel containers will be stored within a secondary containment system e.g., bund for static tanks or a drip tray for mobile stores;
- Ancillary equipment such as hoses, pipes, valves will be contained within the bund;
- Taps, nozzles or valves will be fitted with a lock system;
- Fuel and oil stores, including tanks and drums, will be regularly inspected for leaks and signs of damage.
- Procedures and contingency plans will be set up to deal with emergency accidents or spills, including availability of specialist 24/7 spill contractor in case of major incident
- An onsite COSHH cabinet will be available for the storage of any hazardous chemicals.

Figure 2: Example of a drip tray arrangement

Figure 3: Example of contents of a spill kit

2.4 Oil, Soil and Concrete Spillages

The following outlines specific measures to be taken in the event of an environmental incident that results in accidental discharges. Please note that this is not an exhaustive list and will be reviewed periodically.

As a result of an environmental incident, changes could be made, or additional measures included:

- Site staff will immediately report the spillage to the Site Manager or Foreman
- The Environmental Manager (Coyle Environmental) will also be informed.
- Depending on the nature of the spill, the Environmental Manager (Coyle Environmental) will report the spillage to Inland Fisheries Ireland and Laois County Council

All incidents regarding environmental issues to be reported immediately to Kilwex on the day of the incident including:

- The source of pollution.
- Status of emission source.
- Any contaminated materials caused by the discharge.
- The steps taken to prevent incident happening again

3 Contacts

Table 1:Key personnel contact numbers

Organisation	Position	Name	Phone Number	Email Address
Kilwex	Site Manager	Philip Holmes	086 0842195	philip.holmes@kilwex.ie
Kilwex	Project Manager	Aaron McEvoy	086 103 4052	aaron.mcevoy@kilwex.ie
Waste Contractor TBC				
Coyle Environmental	Environmental Manager	Daniella O'Neill	0868427748	daniella@coyleenv.ie
Inland Fisheries Ireland	Eastern River Basin District	Dublin Regional Office	(01) 2787022	blackrock@fisheriesireland.ie
National Parks and Wildlife Service	North-eastern Region	District Conservation Officer	(076) 1002594	nature.conservation@chg.gov.ie
ESB	Project Manager	Aoife Heneghan	0879822952	aoife.heneghan@esb.ie
ESB	Environmental Specialist	Lorna Conway	087 9202428	lorna.conway@esb.ie
Local Authority	Laois County Council	Environment Section Anne Marie Callan Rory O'Callaghan	057-8664000 086-7966282 086-1438394	
Health and Safety Authority	Health and Safety Authority	Head Office, Dublin	(01) 6147000	wcu@hsa.ie
Emergency Services	An Garda Síochána	Stradbally Garda	(057) 8625222	-
Emergency Services	Ambulance and Fire Service	Ambulance and Fire Service	999 or 112	-

4 Location of Spill Kits

- A map indicating the location of all emergency spill kits and Booms is appended.
- All plant and fleet will be equipped with emergency spill kits.

These will placed in the welfare facilities on site to ensure all who come to site are aware of the location of spill kits in the event they are needed.

5 Responsibility

- All site personnel will report any spillages of oil, fuel, concrete or accidental emissions to the environment and soil to the adjacent watercourses to the Site Manager and Foreman.
- The Site Manager or Foreman will contact the Environmental Manager (Coyle Environmental). As appropriate, the Environmental Manager (Coyle Environmental) will report the spillage to the Regional Fisheries Board, Laois County Council and any other relevant authority.

6 Pollution Preventative Measures

6.1 Design

In regard to possible pollutant emitters on site, by far the most likely is sediment discharge to local rivers. However, as part of design and CEMP a number of preventative measures are being undertaken from both a design and contractor point of view from the onset.

In regard to design, all storm water discharge is being ran through a sediment pond, unlike existing developments where stormwater is deposited directly into local river. Sediment pond works by the following:

- Sediment ponds aid in the settlement of suspended solids in water, as it will slow the flow of water and allow solids to fall to the bottom of the pond.
- As each building has a drainage system, with settlement ponds treatment systems allowed for in each with the aid of stone check dam, water is filtered by means of settlement and stone filtration.
- To control the rate of water discharge a hydrobrake is then placed. This slows the rate of discharge to the local river and aids in settlement by slowing water, thus causing the suspended solids to fall to the bottom of the settlement pond and solid free water to remain at top of pond.

In conjunction with the sediment pond an interceptor tank is used for paved areas and works by the following:

- All water taken from an impermeable area is ran through an interceptor that will separate any oil from water due to oil being an immiscible liquid, meaning oil will stay on top of the surface of water as it is not as heavy as water and so can be filtered off.

All excavated soil on site will be placed in one of two stockpiles, however both stockpiles will have silt fencing placed all around each stockpile, thus catching sediment run off from it allowing water to separate and be caught by means of a french drain placed around the perimeter and filtered in sediment pond.

Also, to prevent any surface run off from the trafficked areas around site into the local rivers, a berm is to be formed on 3No. sides of the site.

Most likely occurrences of pollution on site will come most likely from failure of 1 of these preventative measures. And so, they will be monitored every day. They will need to be maintained to ensure performance. Sediment ponds will need to be cleaned removing the settled suspended solids and silt trenches cleaned pulling sediment laden material back to stockpile to give adequate space for additional run off.

6.2 Contractor Actions

In regard to fuels and oils storage, these will be stored in bunded locked areas to prevent unauthorised access, with spill trays used during filling and top up procedures.

Pollutants like fuel and oil leaks are the sources of the most spontaneous occurrences on site. This is why spill kits are placed around the site and with each piece of construction equipment to prevent the spread outside of the initial spill. In the event of a large release, where substantial amounts of hydrocarbon have escaped, soils will be removed from site to prevent further migration of contaminants subject to the advice of the environmental manager. This will then have to be sent to a licenced facility for remediation. All spill kit paraphernalia, whether it is absorbent granules or sheets that have been used to control release, they must be removed from site and disposed of with a licenced waste facility.

Figure 4: Showing spill clean up using spill kits

In relation to oil and fuel spills in rivers, hydrophobic absorbents are used. This is an oil selective material which repels water and absorbs oil. They come in the form of a long narrow material and are placed across the river. Below is an example.

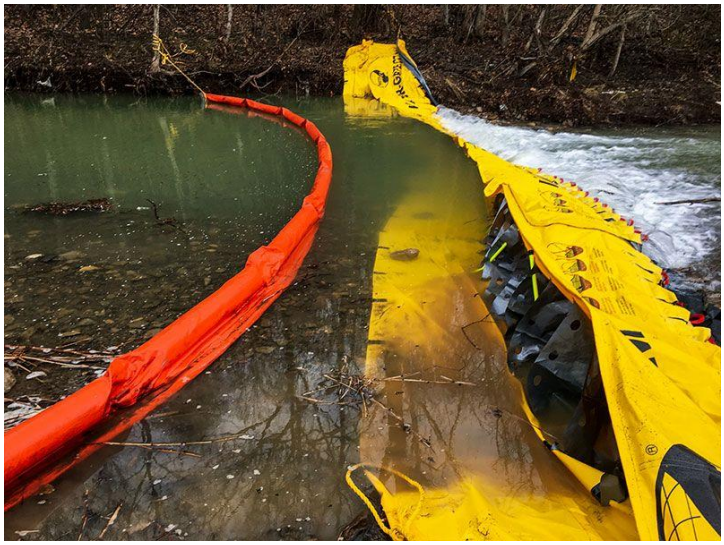
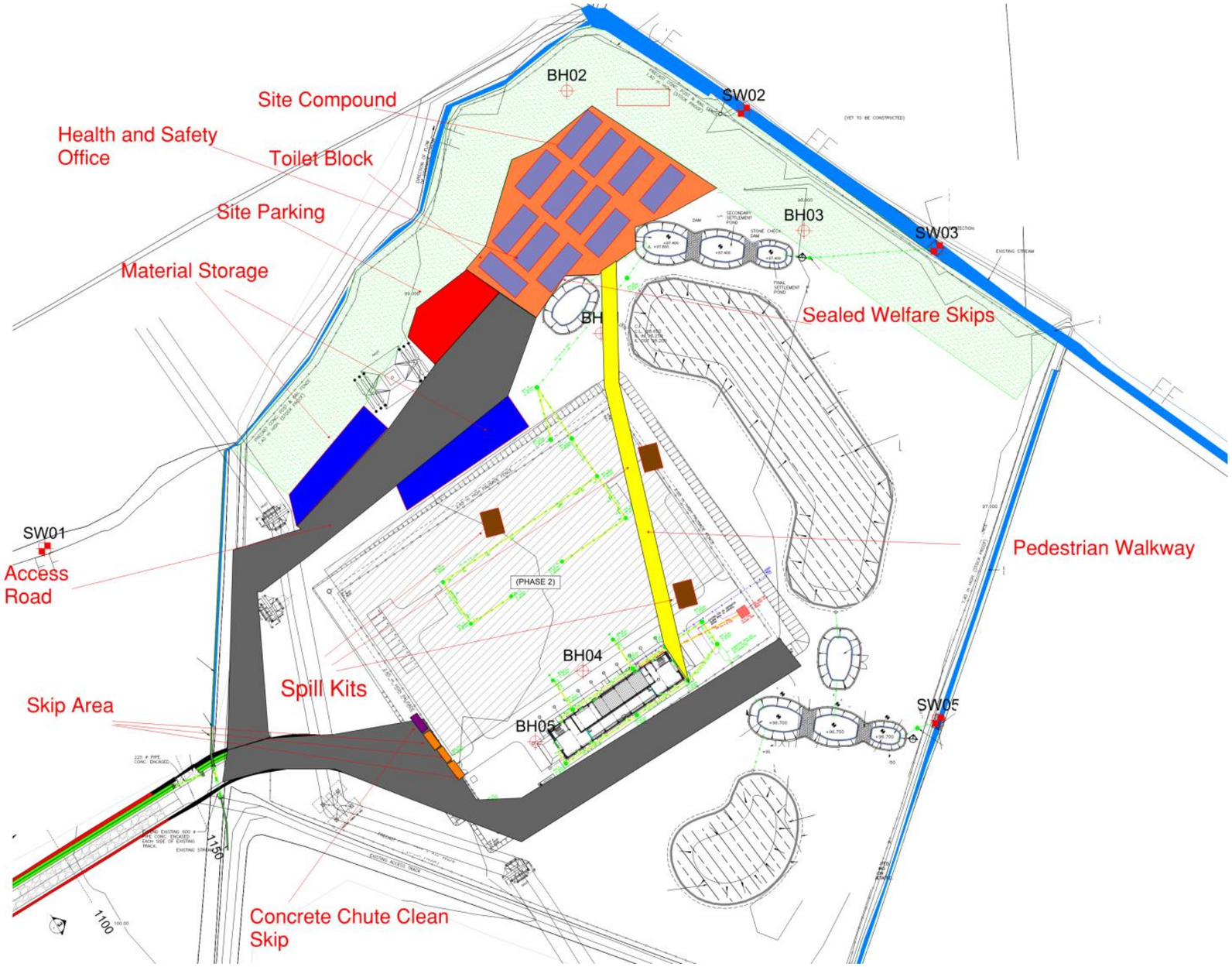


Figure 5: showing in stream silt curtain

7 Appendices

Appendix A – Site Layout with Spill Kit locations identified



Appendix B – Incident Report Form

KILWEX CIVIL

INCIDENT REPORT FORM

Incident Investigation

Project No:		Date & Time of incident:		Date Report Completed:	
Site Foreman:	**Dean Brennan**	PSCS for the site:	**Kilwex Ltd**		
Has the Client been notified? **[ ]**		Was incident: Environmental **[ ].** Property Damage **[ ]** Other **[ ]**			
Fire: **[ ]**	Explosion: **[ ]**	Spillage, leakage, or uncontrolled discharge of substances (other than special, hazardous, or restricted substances): **[ ]**	Spillage of special, hazardous, or restricted substances: **[ ]**		
Emission to air of gas/ dust/fumes or other pollutants: **[ ]**	Pollution of water courses, surface water drains, foul water sewers: **[ ]**	Noise, litter, light, odour, vibration, or another nuisance: **[ ]**	Waste management (escape or improper storage/disposal): **[ ]**		
Other risk:					
Who reported the incident?		When?			
Have photos been taken of scene and any damage:					
Are there costs associated with incident?					
Was the Incident caused by a direct Kilwex Ltd employee?					
If no, name the Employer (Sub-contractor) and relationship to Kilwex Ltd on this site.					

State the exact location of the incident, noting any environmental factors in the area?

What activity was being undertaken at the time of the incident?

Description of the incident, giving as much detail as possible:

Witness Statements			
I consent to allowing Kilwex Ltd to forward on incident report and associated documentation to the Insurance company			
Witness Signature		Date	

INCIDENT REPORT FORM

Site Manager Signature		Date	

Employer/Subcontractor Control Measures - In your opinion what was done to prevent a reoccurrence?

Kilwex Ltd Control Measures - In your opinion what can be done to prevent a reoccurrence?

How has the above control measures been communicated to the employees on site and other contractors on site?

Direct Cause	
Root Causes	
Underlying Causes	

Actions to Prevent Recurrence

ACTION	BY WHOM	DUE DATE	How will these be monitored for effectiveness	Status (Open/Closed/ Ongoing)
			Weekly Site Audits and walks	

Are there any additional appendices to report, if so, these must be listed?

Signed:

Position:

Date: