

HDD GRID CONNECTION

DRAFT ENVIRONMENTAL PROCEDURES

1.0 INTRODUCTION

1.1 General

Egnedol plan to develop a new Biomass Power Station on the north side of Milford Haven, South Wales. The gas supply will be derived from and 18" branch offtake from the 48" Milford Haven to Aberdulais pipeline on the north side of the Haven. To deliver the gas to the power station requires the installation of an 18" Outside Diameter pipeline across the Haven and the associated onshore sections of pipeline including Above Ground Installations (AGI's) which will enable tie-ins to the NG network and the power station. The crossing of the Haven will be achieved by Horizontal Directional Drill (HDD) methods.

The Main Contractor will undertake management and construction role. The main contractor will carry out the onshore sections, surveys, temporary works, pipeline fabrication, and onshore reinstatement operations. The drilling contractor, as sub-contractor to main contractor. will undertake the HDD element of the work including the installation of the pipeline across the Haven.

The purpose of this document is to provide details of the controls and arrangements to limit the impact of the construction work upon the environment.

Section 4 contains Emergency Telephone Numbers which will be developed and updated on site.

2.0 SCOPE OF THE WORK

The scope of work includes the following: -

- Management of the work and control of sub-contractors and suppliers;
- Design, supply, installation and removal of temporary works;
- Engineering and Installation of the AGIs;
- Procurement of materials and equipment other than free issue;
- HDD completion;
- HDD Pipeline Fabrication and Installation;
- Landline Construction;
- Hydrotesting;
- Tie-ins;
- Reinstatement.

3.0 ORGANISATION AND RESPONSIBILITY

The drilling contractor working area will be fenced off from the rest of the site. The drilling contractor will be responsible for work at the HDD sites.

The drilling contractor shall manage the HDD sites, Subcontractors and interfaces with the Client and authorities on site.

The Project Management Team will undertake a management and interfacing role to ensure that the workscope is expedited safely and efficiently.

Brief job descriptions for members of the Project Management Team with responsibility for environmental matters are described in the Environmental Management Plan.

4.0 POLLUTION INCIDENT SITE DETAILS

4.1 Contractor Details

POSITION	NAMES & ADDRESS	CONTACT
Site Address (North Bank)		
Site Address (South Bank)		
Business		

4.2 Contact Details

EMERGENCY SERVICES		PHONE NO	FAX NO	MOBILE NO
Ambulance		999		
Police		999		
Police Emergency contact				
Haverfordwest Police Station		01646 687 059		
Pembroke Dock Police Station		01646 687 059		
Milford Haven Police Station		01646 692 351		
Fire Brigade		999		
Fire & Rescue/ local administration		0870 606 0699		
Pembroke Dock Fire Station		01646 682 185		
Milford Haven Ports Authority	General Enquiries	01646 696 100		
	Port Control	01646 696 137		
Coastguard Maritime Rescue		01646 690 909		
Health and Safety Executive		01267 244 230	01267 223 267	
Environment Agency	Pollution Incident	0800 80 70 60		
	Switchboard	08708 506 506		
Pembroke Dock Town Council (Office Hours)		01646 683 092		
Pembrokeshire County Council, Haverfordwest		01437 764 551	01437 775 303	
Milford Haven Town Council		01646 692 505		

4.3 Site Drainage Plan

For the office spread, the waste water from the cabins and the like will be collected in septic tanks and emptied as required by an outside contractor. Surface run-off of rain water, whilst drilling, will largely be towards the drill entry pit and will become assimilated within our drill fluid system. The level of rainfall cannot possibly be of sufficient volume to create an excess volume of liquid and overflow issues are not envisaged. All water that is used for washing plant, and any spills while, for example, loading cuttings into wagons, will be washed into the clay lined drill entry pit which is a low point within the site.

4.4 Oil, Chemical & Product Inventory (Example)

An oil, chemical & product inventory will be held separately on site and will be amended as products are added or removed.

Oil and Chemical Product/Trade Name	Liquid, Gas or Powder	Container Size / Type	Maximum Quantity	Location
Hydraulic Oil	Liquid			Landline and office area
Fuel Oil	Liquid	5000 gall (22000 litres) tank	5000 gall (22000 litres) tank	Office Area
Field Joint Primer	Liquid	25 litres		Landline
Weld Bevel Cleaner (Acetone / Xylene)	Liquid	25 litres	100 litres	Landline
Radiography Chemicals	Liquid	25 litres	100 litres	Office Area
Oxygen	Gas	Pressurized Bottles	6 Bottles	Landline
Acetylene	Gas	Pressurized Bottles	3 Bottles	Landline
Propane	Gas	Pressurized Bottles	10 Bottles	Landline

5.0 WASTE MANAGEMENT

5.1 Introduction

This procedure details the measures that will be taken to ensure that waste is stored and disposed of in accordance with legal requirements and Best Environmental Practice.

However, it is also the intention of the contractor to prevent or, if not possible to minimise, the generation of waste, and where this is not practical, to recycle or re-use wastes where cost effective schemes exist.

5.2 Waste Segregation

Waste generated within the working area will be segregated and placed in specific skips. Hazardous Waste will be double bagged and labelled with the contents.

Skips or containers provided by the waste management contractor will be used to segregate the waste as appropriate to its disposal requirements. This is expected to be as follows: -

- A - Construction Waste
- B - Scrap Metal
- C - Plastics
- D - Paper and cardboard
- E - Wood
- F - Rope
- G - Hazardous Waste

Provision for further segregation will be made if there are efficient alternative methods of recycling or disposal.

Covered skips or containers will be used where necessary to prevent waste escaping and ingress of water. Skips and containers will be labelled adequately to enable correct segregation. Hazardous waste containers will be fitted with lockable lids and kept locked. The terminals of lithium batteries will be taped to prevent accidental discharge.

Separate arrangements will be made for waste oil drum storage in a bunded area or on spill pallets

5.3 Waste Storage

- Containers shall be clearly labelled and/or colour coded so that the correct container can be easily identified for scrap, general waste, paper etc. as advised by the Waste Carrier;
- Security precautions shall be taken to prevent theft, vandalism, harm or the scavenging of waste;
- Skips shall not have holes in them and will not be filled to overflowing;
- Skip nets or lids shall be used if a waste is particularly prone to wind;
- Liquid and hazardous wastes will be stored in sealed containers.

5.4 Waste Disposal and Documentation

Waste generated will be disposed of via a registered waste carrier to: -

- (i) Licensed landfill site
- (ii) Licensed treatment, transfer, reclamation or storage plant
- (iii) Licensed incineration plant.
- (iv) Site exempt from the need for a licence

Waste will be disposed of by employing a carrier who is registered with the Environment Agency as a Carrier of Controlled Waste. The Site Health, Safety & Environmental Supervisor will check that the Disposal Company holds a waste management licence, a certificate of registration or an exemption certificate before arranging for waste to be transferred. Details of the certificate are to be recorded in the Waste Log.

5.5 Hazardous Waste

Certain wastes are classified as “hazardous” because they have higher hazards such as toxic, flammable, etc. Stricter rules are needed to prevent harm to humans, animals or the environment. The European Waste Catalogue (EWC) lists all wastes, grouped according to generic industry or process. Each waste type is allocated a six-digit code. A waste is hazardous if it is identified in the EWC with an asterisk (*).

Some wastes are classed as hazardous outright. Other wastes require separate assessment to determine whether they are hazardous or not, depending on the amount of dangerous substances present above threshold concentrations.

Sites producing hazardous waste must ensure that the waste is properly identified with the correct European Waste Catalogue six figure number and consigned to a suitably authorised recovery or disposal facility. Different categories of hazardous wastes and hazardous and non hazardous waste must not be mixed (unless appropriately authorised).

The contractor will be responsible for notifying its working sites to NRW as premises producing hazardous wastes under Regulation 21 of The Hazardous Waste (Wales) Regulations 2005 (SI 2005/1806) (as amended) and for assigning consignment codes in relation to hazardous waste consignments from those premises pursuant to Regulation 34.

Hazardous waste must be accompanied by a consignment note which can be obtained through the waste contractor or can be downloaded from the NRW website.

5.6 Disposal of hazardous waste – WAC (Waste Acceptance Criteria)

Each type of Hazardous Waste must be disposed of at a landfill site that is authorised to accept it. Some landfill sites that are classified as non-hazardous may be able to take certain stable non- reactive Hazardous Wastes if they have appropriately engineered separate cells on site.

A landfill site authorised to accept Hazardous Waste will not automatically be able to take all types of Hazardous Waste. Different types of Hazardous Waste may only be accepted at a Hazardous Waste landfill if the license or permit allows it, if certain waste acceptance criteria (WAC) can be met and if the landfill operator is prepared to accept it.

Hazardous Waste needs to be pre-treated before it can be landfilled. The treatment should take into account the limit values set by the landfill site’s WAC. If after treatment the limit values of the landfill’s WAC are exceeded, the waste will need to be further treated prior to acceptance for disposal at landfill.

The ‘co-disposal’ of Hazardous Waste and Non-Hazardous Waste in landfill sites is illegal.

5.7 Surplus Material

There is the potential of surplus material at the end of the project consisting of drill cuttings. To reduce the amount of this material going to landfill, the contractor proposes that the material is utilised in the; Egnedol plan to liaise with NRW to agree a ‘Surplus Waste Movement’ procedure to enable surplus drill cuttings to be used thus.

5.8 Waste Documentation

Controlled Waste Transfer Notes (CWTN) will be completed for all wastes, except Hazardous Wastes, to be disposed of off-site. Where possible, “season tickets” will be used - these enable a single CWTN to cover multiple disposals for up to one year as long as all the details included on the CWTN remain the same.

5.9

Controlled Waste Transfer Notes

A Controlled Waste Transfer Note, obtained from the Waste Disposal Contractor, must be completed, signed and kept by the parties involved when waste, with the exception of Hazardous Waste, but including waste sent for recycling or reuse, is transferred.

5.10 Records

THE DRILLING CONTRACTOR will maintain a register of all CWTN's and Hazardous Waste Consignment Notes and all CWTN's will be retained for at least two years; Hazardous Waste Consignment Notes will be kept for a minimum period of three years. In addition the following documents will be retained: -

- Copies of waste management licences, (or Exemption Certificates);
- Waste Logs;
- Logs of Weekly Inspections.

Copies of all waste transfer documentation and relevant waste carriers registration certificates will be provided to the Egnedol Site Manager within one week of the first waste consignment to which the particular documentation refers.

EXAMPLE WASTE LOG

Waste Description	Process	Storage/ Container Type	Carrier & Registration No.	Disposal Route/ Licence No.	Hazard Code	Quantity (per quarter)
Waste oils and filters	Plant maintenance	Drums in waste oil store	Waste Oils Ltd	Waste Oils Ltd		20 x 45 gallons
Waste solvent	Degreasing	Designated drum	Safetykleen Ltd	Safetykleen Ltd		1 x 45 gallons
General waste	Canteen waste, office waste	Industrial Waste Skip	UK Waste	UK Waste		12 x 13 foot skip

Period:

Authorised Signatory:

Date:

6.0 POLLUTION PREVENTION PLAN (Chemical & Fuel Handling and Storage)

6.1 Introduction

This procedure details the controls that will be taken to control the handling and storage of chemicals and / or fuel. Temporary bunds will not be used.

6.2 Storage

Above Ground Fuel Storage Tanks

All fuel storage within the HDD Site will be within totally enclosed / bunded fuel tanks, including valving etc. The generators will be linked to dedicated tanks which give 5-day running times for each generator. As the HDD work is within a small area, other items of plant will be filled from a static, bunded fuel tank by way of electric pump and delivery hose direct to the plant fuel tank.

Site fuel will be contained in totally enclosed / bunded fuel tanks.

All above ground storage tanks are to be as follows: -

- Located as far as possible from any controlled water or drain;
- Clearly marked with contents and capacity;
- Inspected on a weekly basis;
- Accompanied with adequate spill kits.

Drums

- Shall be clearly labelled according to the waste they contain, (any old labelling shall be removed or deleted);
- Shall be suitable for the type of waste they contain;
- Shall allow enough room for expansion;
- Shall be in good condition and kept with their lids on;
- Liquid wastes of different types shall not be mixed.

The storage of oil will comply with the Regulations.

All fuel tanks must be kept locked when not in use so that fuel cannot be dispensed by unauthorised persons.

Drums will be stored in properly bunded areas.

6.3 Safety

- No new chemicals are to be introduced onto the site without the relevant COSHH / MHDS data sheets;
- The Site Health, Safety & Environmental Supervisor is to brief all First Aiders when a new substance is introduced on to the site as to its properties and relevant First Aid requirements;
- The Material Hazard Data Sheet (MHDS), or Hazard Assessment (COSHH), is to be referred to for instruction on handling, use, storage and disposal; the Data Sheets will be available on site;
- The Site Health, Safety & Environmental Supervisor is to contact the supplier of the chemical for advice if this information is inadequate;
- All those using the substance are to be briefed as to any hazards and the precautionary measures to be taken;
- A log of substances stored on site will be maintained.

6.4 Refueling

- Refuelling from mobile fuel bowzers will be carried out at least 10m from drains, rivers, controlled waters and at least 30m from the MHWM;
- Absorbent pads shall be available and used as necessary when refuelling from mobile fuel bowzers;
- Funnels are to be used when topping up plant or equipment with oil;
- A bucket will be used for collecting any liquid released when breaking the connection during refuelling from a tanker;
- Details specific to the refuelling of a tank (e.g. valve operation sequences) are to be posted at the refuelling point);
- Contaminated absorbent pads etc. shall be placed in plastic bags and deposited in the oily waste container for disposal by an approved Waste Carrier to a licensed facility.

6.5 Disposal of Waste Liquid

- Any fuel or contaminated rainwater in the fuel bund or drip tray shall be collected and disposed of using a Licensed Waste Disposal Carrier;
- Contaminated spill kit materials will be placed in plastic bags and deposited in the oily waste container for disposal by an approved Waste Carrier to a licensed facility.

6.6 Spill Response

Details of the Emergency Crew and Emergency Spill Response are given in Section 7.

6.7 Records

The Site Health, Safety & Environmental Supervisor will keep the following records: -

- COSHH assessments for chemicals and fuels;
- Weekly inspection logs;
- Copies of the Waste Transfer Notes;
- Inventory of oils, chemicals etc.

INSPECTION LOG

Issue	Comment
Are all stored chemicals and fuels properly bunded?	
Have chemicals and fuel drums got lids on?	
Are all drums labelled properly?	
Is there any evidence of spills or leaks around the site?	
Are drip trays being used and emptied as required.?	
Are there adequate numbers of spill kits?	
Are bunds in satisfactory condition, free of water and with undamaged rendering?	
Are tanks and pipework in good condition, with no signs of corrosion or damage?	
Are tanks and refueling points properly labelled?	

Week Ending:

Authorised Signatory

Date:

7.0 EMERGENCY SPILL RESPONSE

7.1 Introduction

This procedure details the actions that will be taken to contain and clean up any spill which may occur on the site.

Response to any HDD spills will be managed by the Contractor in deference to the liquids used in the course of the drilling activities. Personnel will be briefed during the relevant ToolBox Talks and in the event of an emergency personnel will be required to undertake the action under the direction of nominated personnel.

When site activities will be operational on both banks then personnel will be selected for the Emergency Response Crew and will be briefed by the General Foreman about the action plan and exercises will be conducted for practice.

Local emergency contact details will be posted on site.

The equipment and materials noted in Section 7.2 will be available for any such emergency.

7.2 Emergency Response Crew

An Emergency Response Crew will be nominated to respond to typical potential emergencies such as a fuel, oil or chemical spill. The crew will be available on a 24 hr basis and will have access to the following equipment and materials: -

- 4 x 4 vehicle
- Excavator / JCB 3C or equivalent
- Spill kits containing oil / chemical absorbent granules / pads / socks etc.
- Sandbags
- Shovels
- Personal Protective Equipment
- Plastic Bags

7.3 Action Plan

The following actions are to be taken in the event of a spill on land: -

- Identify spill material;
- Eliminate all possible sources of ignition;
- Ensure that no further material can be spilt;
- Contain the spillage using sand, sandbags, absorbent granules and spill kit materials etc. Restrict the movement of material to prevent it reaching a drain or controlled water by building a small bund of absorbent granules, or sandbags;
- Any leaks that cannot be repaired immediately are to have absorbent pads placed under them;
- All personnel involved must wear appropriate Personal Protective Equipment (PPE) before commencing any clean up operations;
- Clear up with absorbents;
- Remove the contaminated material to an approved disposal site using conventional earth moving techniques;
- Cordon off the area if possible;
- Call the NRW Hotline in the event of potential risk of pollution impacting controlled waters, wildlife or human health;
- Call the THE DRILLING CONTRACTOR.

7.4 Post Response Action

- Remove the contaminated material;
- Transfer this material to a skip or sealed lorry;
- Remove to a licensed waste disposal site;
- Whenever possible, reinstate the affected area.

7.5 Records

- Environmental Incident Report Forms;
- Any correspondence from authorities.

8.0 NOISE

For details of noise measures and controls reference should be made to noise control document.

9.0 CONTROLLED WATERS

(which includes Coastal Waters and Groundwater)

9.1 Introduction

This procedure details the controls that will be taken to minimise impacts on the water environment. Records of the location of sewers, surface water drains, water courses, springs etc. will be maintained on site.

The Environmental Statement advises that natural groundwater levels will not affect the pipeline installation works; but in such an event the arrangements of Section 9.4 can be applied.

9.2 General Precautions

The Site Health, Safety & Environmental Supervisor is responsible for ensuring that: -

- adequate arrangements exist to prevent the infiltration of unacceptable liquids into any controlled water by site operations;
- there is no consequential passage of unacceptable liquids or material into any sewer or surface drain or controlled water;
- any oil interceptors, silt traps or other control equipment provided on discharges to surface water or office drainage are inspected visually on each working day and cleaned out and maintained at appropriate intervals;
- the causes of any malfunction are investigated and any necessary improvements made;
- the placing of any wet concrete in or close to any controlled water is controlled to minimise the risk of cement leaking into the controlled water;
- the washing out of any concrete mixing plant is carried out in a manner which will prevent the washout being allowed to flow into any drain or controlled water;
- Should any licences, consents and / or permissions be necessary then the applicable constraints will be complied with.

9.3 Works in or affecting the Haven

The Milford Haven Port Authority (MHPA) will be informed of the drilling schedule. MHPA will, if requested, be supplied with an as-built of the actual position of the cable once it has been installed.

9.4 Groundwater into Pipe Trench

This procedure details the measures that will be taken to control excessive groundwater in the pipe trench. This work will be carried out under Phase 2 of the contract.

Sump Method

- A sandbag wall will be locally installed across the pipe trench;
- At the base of the sandbag wall and at a low point a small (2" or similar) pipe will be installed;
- The pipe will extend from the base of the trench to outside of, and clear of, the trench. The pipe will lie at such an angle as to act as a drain for the water in the trench;
- At the end of the pipe a small sump will be dug and filled with stone;
- The pipe end will be placed into the stone which will prevent local washout of adjacent ground.

At the end of construction the sumps will be removed and the holes backfilled with soil.

9.5 Records

Records will be kept of the following: -

- Any licences and consents.
- Any correspondence with authorities.

10.0 HOUSEKEEPING

Typical housekeeping measures will include the following: -

- All personnel will be instructed to use waste skips and bins;
- Waste bins and skips to be clearly labelled and available around the site;
- Small tools and associated equipment to be stored tidily when not in use;
- Fencing / barriers to be maintained in good order;
- All personnel will be instructed to work in a tidy and orderly manner;
- Car parking to be restricted to designated areas;
- Regular checks to be carried out on signs to, from and around the site;
- Regular tool box talks to be carried out;
- Ensure that all personnel undergo the Site Induction process.

11.0 CONSERVATION

11.1 General

The environmental management plan will be developed prior to commencement of the project will detail the environmental protection techniques that will be adopted.

Typical conservation measures will include the following: -

- Minimise damage to hedgerows;
- Barrier / cordon off areas of a sensitive environmental nature;
- Carry out mitigation measures to minimise the impact of the construction work upon the local environment;
- Instruct all personnel to work in a tidy, orderly and environmentally responsible manner;
- Ensure that all personnel undergo the Site Induction process.

In the event that reptiles and amphibians are found on site then appropriate (relocation) measures will be developed accordingly as indicated in the Environmental Statement.

11.2 Nesting Birds

Before any construction activity takes place the contractor will: -

- Liaise with Egnedol to ensure all specific sites have been identified;
- Ensure the location of these areas are identified on site and;
- Ensure that all habitat locations, i.e. hedges have been netted or that the hedges have been removed (subject to approval) prior to the nesting season (i.e. before the end of February).

Should any ground nesting birds be discovered, the location will be reported immediately and the nesting cordoned off. The nest site is not to be disturbed until the fledglings have flown. (Birds are very tolerant of regular noise, so the chances are that construction can continue around them).

11.3 Hedgerows

In recognition of their importance, the Hedgerow Regulations 1997 specifies that permission is required for the removal of either the whole, or parts, of a hedge. The licence / consent for this activity will be obtained by Egnedol.

Hedgerow Removal

The following measures will be adopted to minimise the extent and duration of the impact of construction on wildlife and landscape: -

- Hedge removal will normally take place during the ROW establishment outside of the bird-breeding season. Disturbing or destroying birds' nests is illegal, so hedgerow removal has to take place outwith the nesting season (the safe period is generally Feb-Mar) to avoid the possibility of work stopping due to nesting birds;
- Before removal the contractor will ensure that a hedgerow survey has been carried out to identify and describe the hedgerows affected by construction;
- The minimum length of hedgerow will be removed and the hedging either removed to a licensed disposal site or temporarily stored on site for later reinstatement;
- Soils from the displaced hedge will be stored separately and used for later reinstatement;
- Prune any damaged hedge plants and protect hedge stub ends left within the working width with orange, plastic fencing or similar;
- Ensure any damage to trees or hedges is reported to the Project Manager.

Hedgerow reinstatement

- The subsoil from the removed hedge section will be used for reinstatement of the hedge base;
- Imported soil will be used to form the hedge otherwise the previously stored hedge will be replaced;
- Nominally six hedging plants, of a similar mix of plants / shrubs as those removed, will be replanted per metre in staggered rows that blends with the structure of the undisturbed sections of hedge;
- All newly planted sections of hedgerow will be protected with rabbit proof fencing;
- Full details of the reinstatement of the hedges, all other key features, and the site in general, are presented in the Reinstatement Procedure.

12.0 STREETWORKS

12.1 Safety Considerations

- Carry out a site specific risk assessment, in order to identify and document any other hazards;
- Place Road Works signs at the correct distance as per the Safety at Streetworks & Road Works code of practice (Chapter 8);
- Work back towards the site placing more signs as necessary keeping on the verge or footway if possible;
- Use portable traffic signals or stop/go boards at the start of the work;
- Establish the Safety Zone by placing traffic cones around the works area;
- Place traffic barriers / cones around the working space;
- Place Pedestrian access ways and road danger lamps where appropriate, and;
- Upon completion of work remove cones, barriers and signs in reverse to the procedure outlined here.

12.2 Excavation Work

- Drawings / details of all underground utility services to be obtained prior to work commencing;
- Trial holes to be dug before excavation by machine;
- Cat scanner to be used before excavation commences;

- Excavated spoil to be kept clear of drains and watercourses;
- All mechanical plant to be inspected for drips before use;
- Minimise noise production where possible – ensure that hoods on compressors / traffic light generators are closed;
- Noisy machinery planned not be used before 8am or after 9pm, apart from in exceptional circumstances;
- Clear work site of any waste and deposit waste into the correct waste containers and removed to licensed disposal point;
- Special waste e.g. aerobic waste should always be disposed of into the designated skips;
- Storage of plant and equipment to be within working area;
- Give assistance to pedestrians in negotiating the streetworks – kerb ramps must be used;
- Road plates to be made of suitable material with an appropriate skid resistant surface.