

James Fisher

Marine Services



Waste Management Plan - MeyGen



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ACRONYMS AND ABBREVIATIONS

EMP	Environmental Management Plan
EWC	European Waste Catalogue
HSE	Health, Safety and Environment
REACH	Registration, Evaluation, Authorisation and Restriction of Chemicals Regs
SEPA	Scottish Environment Protection Agency
SIC	Standard Industrial Classification

DEFINITIONS

Client	MeyGen Limited
Principal Contractor	James Fisher Marine Services (JFMS)
Subcontractor	Other companies contracted by JFMS to carry out the work

SIC CODE and WASTE REGISTRATION

SIC Code	TBC
Waste registration number	TBC

WASTE CATEGORIES AND EWC CODES

Category	EWC CODE
Absorbents contaminated by dangerous substances	15-02-02
Batteries	20-01-34
Bilge oils from other navigation	13-04-03
Filters contaminated by dangerous substances	15-02-02
Fuel oil and Diesel	13-07-01
Grease and oil mixture	19-08-10
Green waste	20-02-01
Metals - Scrap	20-01-40
Metallic packaging	15-01-04
Mixed packaging	15-01-06
Mixed skip waste	20-03-01
Oily water from oil/water separators	13-05-07
Other hydraulic oil	13-01-13
Packaging containing residues of dangerous substances	15-01-10
Paper and Cardboard	20-01-01
Synthetic hydraulic oil	13-01-11
Waste from sorting of Paper, Cardboard, Plastic	03-03-08
Wood	20-01-38

The above list of EWC Codes is not exhaustive but entered into this document as a guide when considering the transfer of controlled or hazardous waste materials from site to waste transfer station where EWC Code input is required.



Document overview

Project overview

The MeyGen project is located in the Inner Sound of the Pentland Firth, the body of water that separates the north Scottish mainland from Stroma Island.

The objective of MeyGen is to become one of the world's first and largest commercially operating tidal energy projects by 2020. The Inner Sound is one of the best sites for the deployment of tidal turbines globally and is widely known as the 'crown jewel' of the Pentland Firth. MeyGen is believed to be the largest planned marine energy development in the world.

The scope of JFMS responsibilities is:

- Cable Route and Stability Analysis
- Design, preparation, planning and procurement for installation for 4 x TSCs
- Marine Works for installation of 4 x TSCs
- Design, preparation, planning and procurement for installation for 4 x TSSs
- Marine Works for installation of 4 x TSSs
- Design, preparation, planning and procurement for installation for 4 x TTG's
- Marine Works for installation of 4 x TTG's
- Tests on Completion and as built documentation for all the above

Purpose of the document

The purpose of this Waste Management Plan (WMP) is to provide an overview of how environmental protection through defined waste management is administered for the James Fisher Marine Services scope of works in the overall Project phase and further where necessary. This WMP outlines the responsibilities and methods utilised in achieving this aim. Due to James Fisher Marine Services' aspirations towards maintaining continuous improvement, the content of the plan will be regularly reviewed and revised as necessary.

In developing this Waste Management Plan, it is James Fisher Marine Services' intention to comply with the environmental obligations under UK and European legislation where the organisation has an impact on the environment.

Due to the nature of the project with potential unforeseen circumstances arising, phase specific plans will be generated by the JFMS SHEQS Manager and issued with a minimum lead time of 20 working days prior to phase start up, these will be circulated to MeyGen for approval and



communicated further to all project personnel, subject to Client approval, via Tool Box Talks, Inductions and/or awareness training as deemed necessary. The content of the communications will cover reduction and re-use using the hierarchy below along with handling, segregation and disposal of waste through approved, licensed contractors.



Scope of document

This document covers the following activities by James Fisher Marine Services:

- Offshore installation and commissioning activities.
- Onshore accommodation, service centre management and administration.
- Storage of hazardous and other controlled waste.
- Disposal of hazardous and other controlled waste.

James Fisher Marine Services Management System

James Fisher Marine Services Environmental policy

The WMP will assist in implementing James Fisher Marine Services' company level Environmental obligations in the specific project where relevant.

Environmental Management Plan

The EMP identifies and aligns legal, Client's and Principal Contractor's requirements and defines James Fisher Marine Services' obligations for the specific environmental management, including applicable organisation, methods and procedures. The Waste Management Plan forms part of the overall structure of the Environmental Management Plan.



Implementation of Waste Management Plan

The implementation of the Waste Management Plan will be initially managed by the James Fisher Marine Services Health and Safety Advisor for the tasks being carried out. Communication of the plans requirements will be delivered through training and regular dialogue with key stakeholders and site personnel. Management of the WMP will ultimately become the responsibility of the James Fisher Marine Services Site Manager for the project phase. Throughout the full project phase, the associated environmental risks, (impacts), will be assessed and the methods reviewed where deemed necessary.

Compliance with applicable legislation.

In considering all elements of environmental and waste management, James Fisher Marine Services shall comply with the following legislation:

- The Environmental Protection Act
- The Control of Pollution Act
- The Waste (Scotland) Regulations
- The Environmental Protection (Duty of Care)(Scotland) Regulations
- Control of Substances Hazardous to Health Regulations
- The Water Environment (Oil Storage) (Scotland) Regulations
- Waste Electronic and Electrical Equipment Regulations
- European Hazardous Waste Directive (1991/689/EC)

Note: This is not an exhaustive list but covers the core legislation applicable to the waste management activities being undertaken.

Clients environmental management system

Below are objectives in maintaining a high degree of commitment to the Client's Environmental Plan regarding Waste Management:

The main objectives with regard to managing the generation and disposal of waste are as follows:



- *To minimise the generation of waste during construction and operational phases wherever possible*
- *To encourage re-use wherever possible*
- *To ensure appropriate transportation of waste to shore*
- *To ensure appropriate segregation of waste onshore*
- *To ensure correct disposal of waste generated*
- *Personnel to understand waste management plans*

James Fisher Marine Services' management and their appointed contractors will ensure the provision of appropriate waste receptacles which will be appropriately labelled to enable waste to be segregated appropriately.

Special waste will be disposed of by the appropriately licensed carriers, all waste transfer notes will be retained on file and indiscriminate follow ups trailing a load to ensure that the special waste goes to where it is supposed to go.

James Fisher Marine Services fully intends to meet the Client's requirements in discharging its duties under European, UK and Scottish environmental laws and in meeting producer responsibilities.

Communication

Environmental information shall be passed on to all relevant members of the various project departments, including sub-contractors, site personnel and others whose work may potentially be affected by the work during the installation phase.

James Fisher Marine Services Progress Meetings

Regular progress meetings are held between the Client and James Fisher Marine Services in line with the project specific requirements. The meeting agenda specifically includes the opportunity to review environmental matters including waste management.

Monthly progress reports

The Principal Contractor's monthly progress report, which will be submitted to the Client, will provide them with the following environmental related information:

- Detailed description of the progressed and planned works
- Environmental protection measures
- Environmental incident reporting



Internal communication on site during Project phase

Tool Box Talk

Tool box talks are held on a regular basis and additionally where required by the project progress. Representatives from all parties involved in the set-up and installation phases will be expected to participate. During the tool box talk, all parties are given the opportunity to discuss and hear advice on environmental matters such as waste disposal and handling and storage of hazardous substances. Details of Tool Box Talks and personnel attending are recorded and maintained on site.

Site/Vessel meetings

Site/Vessel meetings will take place at a designated location or by telephone conference call to be pre-determined prior to commencement of each project phase. The frequency of these meetings will be agreed by the Client Representative and JFMS taking into account the anticipated duration of the project phase. Any waste management concerns will be addressed at these meetings.

Site/Vessel inductions

Site/Vessel Inductions are utilised to raise awareness for personnel regarding site/vessel rules, emergency response procedures and environmental protection arrangements. The waste management requirements form part of the environmental protection arrangements and are outlined within the Site/Vessel Induction.

Site/Vessel notice boards

Site/Vessel notice boards contain relevant site information relating to Health, Safety and Environmental issues. The site/vessel will also have appropriate signage in place to highlight awareness of waste management requirements. Full details of the whereabouts of this information will be communicated as part of the site/vessel induction.

Internal/external environmental audits

External environmental audits may be carried out by the Client or their dedicated contractor. Internal environmental audits will be carried out as spot checks by James Fisher Marine Services management to confirm that organisational and legal obligations are being adhered to.



Communication between James Fisher Marine Services and Subcontractors

In all cases, the WMP and any supporting documents and/or procedures apply for James Fisher Marine Services' subcontractors in the same way as for James Fisher Marine Services' own personnel.

Organisation and Responsibilities

James Fisher Marine Services' roles and responsibilities for relevant members regarding environmental and waste management related activities are described in this section.

Roles and responsibilities

The general responsibilities of the James Fisher Marine Services personnel are described below. The roles and responsibilities for directly employed James Fisher Marine Services personnel and their subcontractors are effectively the same. Information needs to be communicated to all personnel to enable them to understand their roles and responsibilities with reference to waste management.

All persons responsible for environmental management aspects working on the MeyGen project have the following specific responsibilities for those matters.

James Fisher Marine Services Health and Safety Advisor.

The James Fisher Marine Services Health and Safety Advisor is the responsible manager for all environmental related issues relating to James Fisher Marine Services activities on the MeyGen project.

Site Manager. (Onshore and Offshore)

In order to assist the James Fisher Marine Services Health and Safety Advisor in the execution of the Waste Management Plan in line with the legal and Client environmental requirements, the Site Manager will:

- Verification of compliance with relevant legislation.
- Advising the Project team on waste management and related decision making.
- Review existing documentation and procedures.
- Carry out site/vessel inspections or audits.
- Monitor use of receptacles provided.
- Ensure all personnel are aware of cross contamination issues.
- Maintain database of waste disposed of.
- Manage documentation (Transfer notes etc).
- Report any non-conformance to SHEQS Manager.



Phase specific plans referencing the above responsibilities will be generated by the JFMS SHEQS Manager along with the Site Manager and issued with a minimum lead time of 20 working days prior to phase start up, these will be circulated to MeyGen for approval and communicated further to all project personnel as stated previously in the 'Purpose of the document' paragraph.

Environmental Obligations by activity

Set-up

Site set-up waste may vary dependant on phases, initial groundwork remediation and levelling may require the removal of soil and earth which may in turn be identified as contaminated, subject to survey/analysis and must be disposed of in line with National and Local legislation. Wastes from office set-up may involve disposal of polystyrene and polythene packaging along with cardboard/fibreboard, management of all such wastes will be carried out utilising the services of a competent waste management company.

Transport

All James Fisher Marine Services personnel will endeavour to ensure that full consideration is given to the vessel obligations under the MARPOL Convention by complying fully with the vessel management systems whilst on-board. All waste will be brought ashore and disposed of under licenced conditions.

Installation

The installation activities are considered to have a low potential for environmental impacts which includes waste generation, any waste that is produced will be brought to shore as above in line with legal and vessel crew requirements.

Waste management

James Fisher Marine Services recognises its obligations, both legal and moral in relation to the effective management of any waste produced as a result of its activities. This waste management plan has been developed to cover all related aspects of the project and defines



specific responsibilities. All waste will be segregated in line with European and UK Legislative requirements and will be subsequently removed from site by licensed waste removal contractors that are registered with the Scottish Environment Protection Agency. All waste carriers will be verified as competent and periodic audits will be carried out to ensure compliance with UK Legislation and local bye-laws. Waste transfer notes will be held by James Fisher Marine Services for a minimum of 2 years and quantities and types of waste removed will be communicated to the Client for input to their Waste Management Plan. The waste transfer notes and other relevant documentation will be made available to the Client when requested.

Handling, storage and disposal of hazardous goods

All hazardous liquid goods are stored in suitable areas with secondary containment having a total capacity of a minimum of 110% of the stored volume where required under the Water Environment (Oil Storage) (Scotland) Regulations for containers above 200 litres. Suitable spill containment kits are available at the storage location with sufficient materials to suit the conditions and type of substance. Each substance is assessed prior to use and accompanied by a Safety Data Sheet as required within the European REACH Regulations which outlines the manufacturers environmental and disposal recommendations. Disposal of used receptacles and waste hazardous materials is carried out under licensed conditions through recognised hazardous waste carriers. All stored and waste hazardous goods are segregated in line with European, UK and Scottish environmental legislation.

At the time of writing this plan, full details of specific 'remedial' coating requirements for each individual component are not available. Disposal considerations will be outlined in the phase specific Waste Management Plans as outlined on Page 4 of this document.

Incident reporting

Incident reporting will be carried out in accordance with the document JFMS-IMS-09-03-01-001-vA Accident/Incident Reporting Procedure. Environmental incidents and near misses are evaluated on a regular basis.

Performance monitoring

With the envisaged breakdown of project phases, and the projected short term duration of each phase, it is unlikely that any significant trends will be identified.



Construction phase coordination

Clients and/or Principal Contractor's Environmental Management System

During the construction phase, the Clients and/or Principal Contractor's management systems requirements need to be met for the benefit of the overall environmental performance of the project. Interfaces will be mutually reviewed and agreed. This WMP is prepared to compliment the Environmental Management Plan and in line with the Clients and/or Principal Contractor's documents.

Compliance with Environmental policy of Client and/or Principal Contractor

James Fisher Marine Services confirms that it recognises and fully understands, the Clients and/or Principal Contractor's environmental requirements and will ensure that's its sub-contractors do the same. James Fisher Marine Services will ensure that any person working under its control, including sub-contractors, will be sufficiently competent to undertake their work in a safe and efficient manner.